

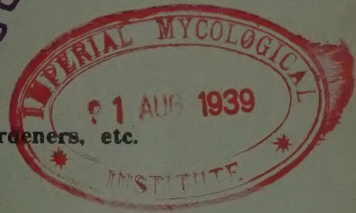
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Vol. XL. No. 7

JULY 5th, 1939

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## Queensland Orchard Notes

SPRAYING FOR CITRUS FUNGUS DISEASES — MANURING AND PLOUGHING ORCHARDS — PRUNING GRAPE VINES — THE COASTAL DISTRICTS.

IN many centres the bulk of the citrus fruits, with the exception of the late-ripening varieties, will have been harvested, and cultural operations should be receiving attention (states the "Queensland Agricultural Journal").

Trees which show indications of impaired vigor will require a somewhat heavy pruning, both in respect to thinning and shortening the branches. Where the trees are vigorous and healthy a light pruning only will be necessary, except in the case of the Glen Retreat Mandarin. The densely-growing habit of this variety leads to a profusion of weak shoots, which, if allowed to develop, will cause overbearing with resultant small and inferior fruit at an early age.

Where trees show signs of failing, investigations for the presence of Collar Rot should be made at or near ground level. The roots should be examined for disease, and in the North Coast districts for the presence of the Citrus Root Bark Channeller. A light application of paradichlorobenzene buried a few inches deep in circular drills around the tree and with the surface stamped firmly has been recommended for controlling this pest. The distance between the circular drills should be not more than 18 inches, and care should be taken to prevent the crystals of paradichlorobenzene from coming into contact with the roots. It may be necessary to repeat the application after an interval of three or four weeks.

Where it is necessary to control Black Spot, Melanose, and Scab, the fungicide should be applied at the correct time. The control measures recommended are:—

### For Black Spot.

Bordeaux of 3:2:40 strength or Bordeaux of 3:2:40 strength + 1 per cent. of oil emulsion—

(1) As soon as the fruit has set;  
 (2) About a month to six weeks later;

(3) If Black Spot has been serious previously, another application just prior to the February rains.

### For Melanose.

The use of a similar fungicide—

(1) Immediately the fruit has set;  
 (2) A month to six weeks later, or more often if the weather conditions are exceptionally wet.

### For Scab.

(1) Bordeaux mixture 6:4:40 or Bordeaux 6:4:40 + 1 per cent. oil

emulsion immediately before the new growth commences; this will help to clean up fungus on the old scabs;

(2) Bordeaux 3:2:40 or Bordeaux 3:2:40 + 1 per cent. oil emulsion at about the middle of the flowering period; this and subsequent applications are for the protection of young foliage and fruit;

(3) Bordeaux as soon as the fruit has set;

(4) If the season is exceptionally wet, it is advisable to give one or two further applications in order to keep the young fruit and foliage well covered.

### Budding.

Where for any reason healthy trees of vigorous constitution are unprofitable, they may be headed back—in fact, have the whole of the top removed—leaving a few selected arms. All other branches should be cut away at their source of origin. The three or four remaining arms, of which lengths will vary from 2 to 4 feet, will form the future framework of the tree. Care must be taken to cover the whole of the exposed bark with a suitable coating of white-wash to prevent sunburn. The numerous shoots which will grow from main arms should be suitably reduced, leaving from two to four on each arm. Under favorable conditions, these will be in a fit condition to receive selected buds from desirable trees by the following Autumn. It is desirable that when shoots intended for budding have attained a length of from 6 to 9 inches, the terminals should be nipped off in order to stiffen their growth and guard against the possibility of damage by strong winds.

### General Culture.

Fertilising should be completed as early as possible, the mixture for the Spring application being high in readily available nitrogen. Ploughing should then be completed, the depth being regulated by local conditions and the nature of the original preparation of the land. Following the ploughing, the land should be worked down to a fine state of tilth. On hill-side orchards attention should be given to the care of possible storm waters. Cultivation should be so arranged as to form shallow drains or banks along the tree rows and across the heaviest slope, leading into suitable side drains which may be grassed to prevent erosion.

The planting of trees may be continued and, with the exception of Custard Apples, expedited. The attention of citrus growers should be confined to varieties suited to their local conditions.

The pruning of Grape vines should be completed, and where cuttings for planting are required these should be selected, trimmed, and heeled-in in slightly dry soil. Canes intended for cuttings should not be allowed to lie about and dry out, but should be treated the day they are severed from the plant. Cuttings are frequently made of excessive length. From 10 to 12 inches is a suitable length which allows for insertion in the soil so as to permit of the top bud, with a short section of the internode, protruding above the surface.

### The Granite Belt, Southern and Central Tablelands.

All pruning other than that applied to Peaches and varieties which are late in coming into growth should be completed this month, and the planting of young trees, if not already done, should no longer be delayed. Early planting is preferred, the sooner after the fall of leaves the better. When there are indications of the swelling of the buds, the time is opportune for working over unprofitable trees, where the stock is reasonably vigorous. Strap grafting, as advised by the local field officers, is the most satisfactory method of top-working deciduous trees.

The pruning of vines should be postponed as long as circumstances permit, and these can only be gauged on actual observation, as they are subject to much variation.

The usual Winter working of the land is essential for the retention of moisture and aeration of the soil, but in shallow soils in which many orchards are planted, deep working is most detrimental. The matter of seedling stocks for Apples and the inferior plants frequently received from Southern nurseries prompts a query as to how many seeds have been stratified for Spring planting, and whether any effort is being made towards raising a local supply of nursery stock.

### BRISBANE ROYAL SHOW.

The Brisbane National Royal Show, together with the 1939 Electrical and Radio Exhibition, will be held in Bower Park, Brisbane, August 14-19. There is £12,000 in prize money offered for stock and crops. Entries closed on July 3.

An American crooner is learning to accompany himself on the harp. Optimist!

### APPLES FOR MR. CHAMBERLAIN.

The President of the Stanthorpe (Q'land.) Branch of the Royal Society of St. George has received the following acknowledgment from the British Prime Minister, Mr. Neville Chamberlain, for a case of Granny Smith Apples which were sent by the Branch.

"I am greatly gratified to have this token of interest and approval of your far-off branch of the Society, and I shall be grateful if you will convey to your members my warm appreciation of their message and their gift. I can assure them that I shall not cease from my efforts to maintain peace for the Empire and the world."

### THE EFFECT OF APPLES ON MILK PRODUCTION.

#### Arsenical Residue Not Injurious.

The tests recently conducted in U.S.A. regarding the effect of Apples on milk production are reported in the 48th annual report of the Washington State Agricultural Experiment Station as follows:—

This is a study (1) to determine if the spray residue on Apples will affect the health or production of dairy cows, and (2) to determine if Apples, when fed, to dairy cows will cause any deleterious effect on milk production.

The Apples used had been sprayed with a lead arsenate spray, but the coverage was not nearly so heavy as is common in the Apple-growing region. There were apparently no effects whatever on the sheep in the digestion trials or the cows in the feeding trials. To check the possible effect of spray residue further, three cows were fed 30 pounds of Apples each daily for 75 days. Lead arsenate in an amount equal to the greatest coverage observed under heavy spray conditions was added to the Apples fed one of the cows. A second cow was given one half this amount, and the third cow received no lead arsenate.

There were no noticeable effects of including the lead arsenate with the Apples. The milk showed no arsenic, and the blood showed only a trace. Practically all of the arsenic was eliminated in the urine. It is not probable that cows fed Apple silage or Apple-Lucerne silage would get as much lead arsenate as was fed in this case, and it would seem, therefore, that one need not be apprehensive with regard to spray residue in utilising Apples as silage.



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## NEWS OF THE MONTH.

### Apple and Pear Board.

THE AUSTRALIAN APPLE AND PEAR BOARD held its first meeting in June, when the time was fully taken up with examining the budgetary position and in preparing the machinery for the effective functioning of the Board. Another meeting of the Board will be held in July.

A pleasing feature was the degree of Interstate understanding, which resulted in the visualising of the industry from an all-Australian aspect.

The Board is also charged with the responsibility of administering the funds to be collected under the Apple and Pear Publicity and Research Act.

By improvements in the export trade and development of the local market, a more stabilised position for the industry should eventuate.

:: :: ::

Publicity on a modified scale is now being conducted in the several States; excepting that in W.A. the publicity is of a most vigorous character in order to move into consumption the record crop of Apples in the Western State. They conducted there a successful Apple Week.

The "Apple Week" conducted in Melbourne was also highly successful, a detailed report is published in this issue. The industry is under a debt of gratitude to the honorary committee which made the arrangements. There was also forthcoming ready assistance from all sections of the community, and it can be said that "Apple Week" is now an established feature in the community life of Melbourne.

Both the Sydney and Brisbane Committees are performing excellent service.

It is expected that Apple Weeks will also be established in all the mainland capital cities. This could be extended to country towns, and there is no reason why a National Apple Week should not be instituted. This, however, is a matter for discussion as it may be more convenient to hold the functions at varying times in the several States.

### THE CITRUS INDUSTRY.

IMPROVEMENTS IN THE CITRUS industry are likely to follow as a result of the decisions of the Citrus Advisory Council.

Educational publicity is being now conducted to increase the consumption of Oranges—principally as juice. In this connection the Victorian Central Citrus Association has prepared some extremely valuable propaganda material of educational value, and this is being disseminated by means of the

press, by pamphlets and in other ways.

:: :: ::

Once again it needs to be emphasized that there is no real clash between the various fruits as regards publicity. A "fruit consciousness" is needed among the general public—a general increase in the consumption of all fruits and vegetables.

### FRUIT JUICES AND BY-PRODUCTS.

ATTENTION IS AGAIN DIRECTED to the important enterprise which is steadily taking shape in Australia, viz., the preparation of various fruit juices for public consumption.

The extent to which the fruit juice business has developed on the Continent and in England is amazing. Now the Council for Scientific and Industrial Research is carrying out experiments, the results of which should form a basis for the further commercial development of this enterprise in Australia.

Already good work has been done, but the field is vast. To the preparation of pure fruit juices the medical profession will assuredly give its unqualified support. Also there is the question of synthetic preparations, many of which are deleterious; at the moment these have an enormous sale in Australia. The fruit industry must give attention to this matter in seeing that these synthetic drinks are replaced by pure fruit juices.

:: :: ::

Another field for enterprise is that of fruit by-products. Substantial developments have followed the efforts of trained leaders in U.S.A. in this matter as revealed in the very interesting article published in our last issue. State Governments in U.S.A. have provided money for research into fruit by-products with pleasing results in benefiting the industry and the general public.

### SEASONAL MARKETING.

Attention has been directed many times to the serious effect on the markets where varieties are marketed out of season. This matter forms the subject of a special article in this issue by the Market Representative of the Fruitgrowers' Federation of N.S.W., and is supported equally from comments from Brisbane. To quote just one sentence from the Sydney market report: "Buyers are now sceptical regarding the value of Jonathan, this variety from N.S.W. and W.A. having finished in June, while from Tasmania uncertain keeping quality is a feature of many varieties."

Spasmodic attempts have been made to correct this unfortunate position, but still it persists, to the detriment of growers, distributors, and the public.



In these days, when decisions on matters of policy are being made, it would appear to be necessary that this item of marketing varieties only in their proper season should receive definite attention.

#### OBITUARY.

The death occurred in a Shepparton private hospital on June 18 of Mr. E. A. Pearce, who for twenty-one years had been the able and conscientious Secretary of the Shepparton Fruit Preserving Co.

The news of his death came as a tragic shock. He was always most helpful and willing to provide every possible assistance to growers and the industry in general.

The sincere sympathy of all fruit-growers is extended to the bereaved relatives.

We also regret to record the passing of Mr. G. Claxton, of Ardmona, who was one of the pioneer fruit-growers of the Ardmona district, and a highly respected resident. Our sincere sympathy is extended to his widow and family.

#### PERSONAL.

Mr. J. C. Arkell, Secretary of the Brisbane Fruit Merchants' Association, visited Tasmania and Victoria during June. He was much impressed by the quality of the Tasmanian Apple crop, and spoke highly of the educational publicity efforts in Victoria and other States to increase Apple consumption. He favors holding an "Apple Week" in Brisbane along the lines of the successful Melbourne effort.

Mr. K. Weeding, who recently returned from abroad, is rendering good service by displaying to growers' meetings the very interesting moving pictures he took showing aspects of the fruit industry in U.S.A., Canada, and elsewhere.

Mr. E. Noonan, President of the Southern Victoria Fruitgrowers' Association, has revealed qualities of leadership in this position, also in his position as Chairman of the Apple Week Committee.

Messrs. J. L. Provan, T. H. Kneen and C. E. Cole, of the Victorian Dept. of Agriculture, gave interesting broadcast talks during the recent successful Apple Week in Melbourne.

Mr. W. Young has been re-elected President of the Northern Victoria Fruitgrowers' Association. Mr. Young is one of the Victorian fruitgrowers' delegates on the Australian Apple and Pear Board, and is also a member of the Fruit Industry Sugar Concession Committee. He holds several other posts of leadership in the fruit industry, in addition to being a successful orchardist.

Dr. Joan Hearman, who is at present stationed at the Griffith (N.S.W.) Research Station of the C.S.I.R., investigating the cause of Orange trees dying back after 15 years, has just returned from a holiday of three weeks in Western Australia.

Mr. J. B. Mills has been elected Chairman of the Australian Apple and Pear Board. Mr. Mills was the unopposed Chairman of the Australian

Apple and Pear Council since its inception. He is Chairman of the Victorian Fruit Exporters' Handling Committee, a member of the Executive of the Victorian Fruit Marketing Association, and holds executive positions in organisations designed to improve shipping and business conditions.

#### Fruit Industry Personalities Knighted.

In the recently issued birthday honors list were included the following:—

##### Sir Gerald Mussen.

Among his many activities, Sir Gerald Mussen took an active part in organising the Victorian Central Citrus Association Pty. Ltd., and was its Chairman from 1927 to 1930. Sir Gerald Mussen was born in New Zealand and educated at Southland High School, Invercargill. He was industrial consultant, Electrolytic Zinc Co. of Australasia Ltd. and Broken Hill Associated Smelters from 1915 to 1928. He holds office in several large proprietary companies, and is the author of "The Humanising of Commerce and Industry."

##### Sir William Charles Angliss, M.L.C.

Sir William Angliss holds substantial interests in fruit and other cool stores. He was born in England in 1865, coming to Australia in 1884. He has been a member of the Legislative Council for the South Province since 1912. He represented the meat export trade at the Ottawa Conference. He was chiefly responsible for the establishment of the Northcote Farm School for young migrants, near Bacchus Marsh. He has been interested in the training of youths generally, and has given large sums to assist them.

#### N.Z. FRUIT MARKETING.

##### Committee Appointed for Government Investigation.

THE N.Z. Government has decided to set up a committee to consider all questions relating to the fruit industry on the marketing side. This was in response to a request from the industry to the Government for centralised marketing and stabilised prices.

The Acting Minister for Marketing (Hon. W. Lee Martin) stated that the committee would examine every aspect of fruit marketing, from the orchard to the consumer, both in N.Z. and overseas. This was necessary to see that if the Government provided the facilities asked for they would be effective in giving the producer a reasonable standard of living and ensuring that the consumer was served as efficiently as possible. This would entail a thorough examination of the functions performed by all intermediaries between the producer and the consumer.

The personnel of the committee is as follows:—Mr. Lee Martin (chairman); Mr. F. R. Picot, Director of Internal Marketing (deputy-chairman); Mr. T. C. Brash, president of the Fruitgrowers' Federation; Mr. W. M. Benzies, secretary of the Fruit Export Control Board; Mr. E. J. Fawcett, Assistant-Director of Agriculture; Mr. C. J. Skinner, M.P.; Dr. W. B. Sutch, economist; Mr. J. E. Thomas, fruit officer of the Internal Marketing Division.

In order to combat the wages log submitted by the A.W.U., the Victorian Central Citrus Association has prepared a specimen statement for growers to fill in showing capital cost and expenses for working their holdings. Growers are urged to supply the full particulars asked for, or a copy of income tax returns to their Association.

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—then use the World's Best—**

# NEPTUNE SPRAYS...

The better quality of NEPTUNE Sprays is always obvious by comparison with others. NEPTUNE Sprays conform to the highest standards, and they are consistently uniform in strength and quality. Successful orchardists recommend them. Try them yourself and prove that they're better!

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# Spraying for Control of Insect Pests and Fungus Diseases

## Control of Scale on Citrus Trees

FUMIGATION AND SPRAYING ADVOCATED.

(E. R. Moss, Berri.)

IT IS A WELL KNOWN FACT that there is a continual fight for existence amongst human life, animal life, insect and plant life. In some cases disease has to be continually fought against, and in other cases one section preys on another section for existence. The citrus family of plant life is no exception to this law of nature, and there are over 200 species of scale life in the world which depend on citrus trees and other plant life for their existence. Only a few of these scale insects have become a pest in the Murray Irrigation Areas. Chief of these are the Murrel, Brown or Olive Scale and the Red Scale. If these scale insects are allowed to go uncontrolled, the citrus trees that are attacked soon become almost non-productive and of no commercial value to mankind. Citrus scale has its natural enemies, but not in nearly sufficient numbers to keep it in control.

**Brown Scale:** The life history of Brown Scale is as follows:—The adult scale has a wax covering and is visible to the naked eye. The coloring is pale grey to reddish or light brown. This is one of the varieties of scale which lays eggs. Each scale lays between 30 to 100 eggs, according to the size of the scale, these eggs being hardly visible to the eye. There are between three and four generations according to temperature. This is the scale that causes the sooty mould on the citrus fruits.

**Red Scale:** Red scale is the most tenacious scale with which we have to deal. Where pruning out of trees and hot temperature will keep Brown Scale in check, Red Scale will still carry on and multiply. This scale does not lay eggs, but the larvae are born alive and are known as crawlers and can move about for a few hours up to three or four days. One female scale can, over a period of two months, produce from 100 to 150 young scale. There are three stages of development according to climatic conditions, and a young scale hatched in Summer can in about 50 days reproduce. If we care to go into figures it would seem

there would be millions of scale born in one season; that is so, but only about 80 per cent. of these young scale survive. It can be seen that the longer the scale is left without any attempt at control the more the scale will increase in numbers and spread through an orchard, and eventually spread through a district.

Red Scale is introduced into and spread throughout a district in various ways. Although the male Red Scale has wings and can fly, it is the female scale that carries on the work, and the female on its own account cannot move any distance. Probably the chief source of infestation is through being introduced on plants from the nurseries. Red Scale is partial to citrus trees, but is also to be found on other plants, various pot plants, ivy, and roses.

In the last three places on which scale has been found in Berri it has been on young citrus trees up to four years of age. These plantings are widely separated and a long distance from any infested orangery, so it appears that this scale came in on the young trees. Every person, grower or otherwise, should become acquainted with the appearance of Red Scale and keep a sharp lookout on all plants, and if at all suspicious immediately report it to the proper authorities.

When Red Scale has been introduced into an orangery for the first few years the spread fortunately is very slow, but if left unchecked for any length of time the spread is gradual from tree to tree until quite an army of scale is bred up; then the spread over the orangery is much more rapid.

The various means of spreading are as follows:—If the trees are touching the young scale can crawl from one tree to another, but probably the main source of spreading is by being carried on the feet of birds from tree to tree and from orangery to orangery. Other means are by being carried on boxes and bags, on horses and human beings working amongst the trees, or carried by irrigation water along the furrows and blown about by the wind.

### Methods of Control.

**Brown Scale:** Prune the trees out sufficiently to let in light and air, and to cut off all branches hanging on the ground. This method, when followed by hot weather, will often clean up Brown Scale, but does not do so in every case.

After pruning a spraying with white oil of a 40 to 1 solution will give a very good kill, but not often a 100 per cent. kill, enough scale being left alive to form a breeding squad. Fumigation with hydrocyanic acid (commonly known as HCN) will give a good kill—in some cases 100 per cent. It seems to depend just at what stage the scale is fumigated and the weather following, as one does not always obtain 100 per cent. kill with fumigation. To be absolutely certain of obtaining a 100 per cent. kill adopt the methods advocated for dealing with Red Scale.

**Red Scale:** Prune trees as for Brown Scale, making sure that all branches are pruned up off the ground so that when the fumigation tents are put over the trees the tents do not rest on the branches on the ground; this ensures that the gas comes in contact with all parts of the trees. Clean up all weeds and rubbish under and around the trees so that the tents will lie flat on the ground and there will be no loss of gas. Trees should then be thoroughly drenched with a white oil spray. This spraying will probably give a 90 to 95 per cent. kill, but it is not sufficient. Ten per cent. of scale still alive means 100 live scale in every thousand, and when trees are badly infested quite a large number of scale are left to carry on. Fumigation alone will probably give a 98 to 99 per cent. kill so this method alone is not sufficiently efficient to keep trees clean for any length of time. If fumigation alone is adopted it should be done every two or three years.

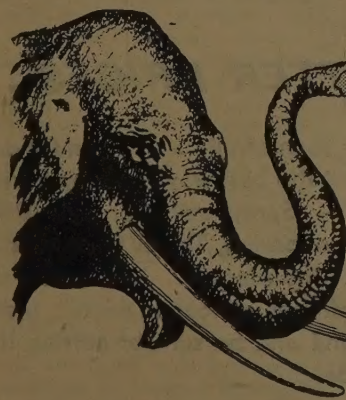
The most satisfactory method to use is the method adopted by the Berri Citrus Association last season and used in other districts as an experiment, and which has given 100 per cent. efficiency. After the white oil spraying has been done follow this up with a fumigation commencing about four weeks after completion of spraying. The time elapsing between the spraying and the fumigation does not seem to be very important, as owing to weather conditions prevailing last season, some orangeries were

not fumigated for 14 weeks after being sprayed, and the result was just as satisfactory as those done early. However, if possible, the fumigating should be done within two months of spraying. It is not intended to claim 100 per cent. kill on all blocks treated last season, because on one block a couple of trees were found with live scale attached, but so far on none of the other blocks has live scale been found which is an exceedingly satisfactory result considering the trouble Red Scale has caused in the past.

### Time of Treatment.

**OIL SPRAYING** should be done not earlier and not later than November. November is somewhere about the time the young scale commence to move, and a spraying then is very effective. It is not considered that spraying any earlier than about November 8, is of any use as a spraying before the first setting of fruit definitely causes a big dropping of the fruit. A case of this kind occurred with a prominent grower in Mildura who sprayed his trees just after flowering and he considered an 80 per cent. drop occurred in comparison with trees that were not sprayed. In our own district a grower who had Red Scale on a few trees and who was determined to wipe out the scale at all cost sprayed his trees twice with white oil before the fruit had set and he had about 100 per cent. drop.

The fumigation should then follow on at the time mentioned. Providing weather conditions are suitable fumigation can be done at any time of the year. Trees have been done in July as an experiment. These were done in the day time, and the results were quite satisfactory; very little leaf fall and excellent kill of Brown Scale. Trees have also been fumigated in October when in full bloom, the idea being to find out whether a fumigation then would assist setting or otherwise, and whether there was any appreciable difference in markings on the fruit. Six trees on two different sections of the block were fumigated, two trees being done by day and four by night. On the north-western corner of the trees done in daylight there was burning of the blossom shoots and some of the old leaves fell. On the four trees done at night there was not the slightest signs of any burning or leaf fall. The setting of the fruit was no better or worse than those



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Extract from "BETTER FRUIT," March, 1937, by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLIN MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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not fumigated. There was a good setting on all trees last season and it is intended that the same experiment be carried out this season, when generally the setting may not be so good. As far as could be seen without making any count there was no difference in the blemishes on the fruit, so the conclusion is that the wind is the chief cause of blemishes. The fumigation following the spraying is of course done in the Summer months and was all done at night with one exception. The only damage done was on the one which was done in daylight, and in this case a large proportion of the leaves fell off the trees, the reason here being because they were done too soon after an irrigation, which was followed by in. of rain. Moisture on the trees caused by dew or rain or moisture on or near the surface of the ground is to be watched, and fumigation should not take place if these conditions prevail. Weak trees caused by bad drainage will show damage where healthy trees have shown no ill-effects.

Fumigation is not new, but of late years different methods have been adopted. The old method was to pour sulphuric acid into cyanide and place the pot under the tent, and the gas was thus given off. This method caused a generation of moisture, and when used in daylight considerable damage was done to the trees. The latest method is the blowing of dust into the tents with a blower and the dust coming into contact with the atmosphere creates the poisonous gas. This method can be used with perfect safety in the day time, providing the trees are healthy and the weather not too hot. Just as good kills for Brown Scale have been obtained with trees done in daylight as with trees done at night, but at the same time all fumigation done in the Summer months should be done at night as it is more comfortable to work the tents and there is less likelihood of damage being done to the trees.

#### Does it Pay to Spray and Fumigate?

I would say most decidedly that it does. Fruit covered in sooty or Red Scale, according to law, cannot be put on the market. This fruit, when washed, depreciates in value from 1/- to 2/- or more a case, and then on top of that is the cost of washing. It cost one grower £150 in labor to wash his fruit. He has since had his orangery fumigated at a cost of £45, and he has been free from scale since. This shows a big margin of profit. On badly infested trees the crop production decreases considerably—from one to three cases per

## CODLING MOTH CONTROL

### Latest Information from U.S.A. ∴ New Methods Tested

THE POSSIBILITIES OF REPLACING LEAD ARSENATE IN THE CONTROL OF CODLING MOTH AND OTHER INJURIOUS APPLE PESTS BY INSECTICIDES NON-INJURIOUS TO MAN.

(R. L. Webster and James Marshall, U.S.A.)

IN THE RECENTLY ISSUED annual report of the Washington State Agricultural Experiment Station, Pullman, Wash., U.S.A., the following interesting information is given.

For the second successive season, the use of inverted cryolite spray mixtures resulted in a degree of Codling Moth Control superior to that obtained with inverted lead arsenate mixtures. Such mixtures, though apparently the most effective available, have not been recommended to growers because of the difficulty of handling in the spray tank. This difficulty appears to have been largely overcome by the development of a new spraying device which may be termed a synchronised spray concentrate injector.

The concentrate injector is an apparatus whereby concentrated spray materials may be injected into the water supply of the spray pump at a constant ratio to the flow of water. Its use eliminates the need of a spray tank and the agitation therein, and obviates the necessity for constant attendance at the spray pump. This new method of handling spray mixtures may have wide application for spray mixtures of all kinds. A nicotine-sulphate-bentonite herring oil mixture again was found to be an effective combination for Codling Moth control.

Its effectiveness and nicotine content persist at higher levels than in

tree. The cost of spray fumigation method will be from 2/6 to 3/- per tree, according to size and number of trees to be done. Put the cost at 3/- per tree and the production per tree, four cases per tree. The position will be as follows:—Washing four cases at 6d., 2/-; extra value of clean fruit, at 1/- per case, 4/-; say one case extra production at 3/-, 3/-; total, 9/-; expenses for fumigation, 3/- . After trees have been fumigated in the Summer months, try if possible to irrigate them immediately. This is not always possible, but put water on them as soon as possible, as well as a dressing of sulphate of ammonia, and trees will look brighter and will have that dark green appearance looked for in Orange trees. —"S. Aust. Jour. Agric."

any other nicotine spray mixture yet investigated at the experimental orchard in Wenatchee. However, applications of seven cover sprays of this combination produced a residue of bentonite on the Apples which required a brush-equipped washing machine for removal. With a concentration of nicotine sulphate of 1:800, it is likely the mixture is too expensive to be practical in the warm lower valleys of central Washington. Further investigation is necessary to establish the minimum quantity of nicotine sulphate needed to give satisfactory control.

Field and laboratory experiments show that in the control of the Codling Moth by insecticides, physical as well as chemical factors must be considered. In one case, for instance, zinc oxide applied as an inverted mixture has controlled worms as well as an equivalent amount of lead arsenate used without oil. Yet zinc oxide is not regarded as toxic to the Codling Moth. It has been determined that uniform and heavy deposits of powdered insecticides, such as lead arsenate, exert a deterrent effect on Codling Moth entry, one that may equal the toxic effect produced by their solubility in the alimentary tract of the insect.

The use of an inverted zinc oxide mixture on a block of Apple trees at Wenatchee was found to interfere with Apple coloration and was practically impossible to remove at harvest. Worm control was not satisfactory.

**Sprays for Codling Moth Control.** (Kermit Groves, Main Station, and Herman Fallscheer, Tree Fruit Branch Station, in Co-operation with Division of Entomology.)

MINERAL OILS, when used in inverted spray mixtures, are the most effective adhesive agents yet found for building high deposits of lead arsenate, calcium arsenate, cryolite, and other insecticides on Apples. The type of oil used in a mixture influences its properties considerably. The rate of evaporation of the oil, the hardening of the insecticide deposit on the fruit, the physical nature of the deposit and the ease of removal of the spray residue vary greatly with different oils.

Soft oily deposits of lead arsenate seem more effective against Codling Moth than hard, dry deposits. Solid and semi-solid fats, such as lard and hydrogenated animal and vegetable oils, dissolved in kerosene or heavier mineral oils, form coverages that remain oily much longer than deposits applied with oil alone.

No injury to the trees was observed when stove oil (unsulfonated residue above 70 per cent.) was substituted for kerosene in spray mixtures in one-half per cent. concentrations.

Inverted or "Dynamite" cryolite sprays continued to give much heavier deposits than the usual cryolite fish oil sprays.

Coverage determinations were made on Apples and leaves from twelve plots sprayed with different nicotine mixtures. Only the mixtures containing bentonite showed a build-up of nicotine deposits, and the trees retained the nicotine for a far longer period than those sprayed with the other mixtures.

#### Spray Residue Removal.

(Kermit Groves, J. L. St. John, Main Station, and Herman Fallscheer, Tree Fruit Branch Station.)

THERE HAVE been no marked changes in procedures for the removal of spray residue in the past year. Interest was centered on commercial removal of the spray residues from inverted mixtures. Apples sprayed with inverted mixtures of lead arsenate, calcium arsenate, zinc oxide, nicotine-bentonite and cryolite were washed under commercial conditions. Samples of fruit, including Jonathan, Delicious, and Yellow Newton Apples, and Bartlett Pears were selected from 22 of the 1938 experimental plots. The visible residue on fruit heavily sprayed with nicotine-bentonite was not removed satisfactorily with a single acid wash, but was cleaned with a tandem wash of silicate and acid. Zinc oxide presented some difficulty in removal.

**Mineral Oil Sprays for Insecticides.** (R. L. Webster and James Marshall, The Division of Horticulture and Chemistry Co-operating.)

ALL THE ENTOMOLOGICAL phases have been carried out at the Tree Fruit Branch Experiment Station at Wenatchee, U.S.A.



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# Science in Fruit Growing

WOOLLY APHIS CONTROL BY APHELINUS IN RUSSIA — SPRAY RESIDUE ON APPLES — SOYA BEANS IN NEW ZEALAND — TOMATO CULTURE — SELENIUM IN SPRAYS FOR CITRUS AND GRAPES — TUNG OIL PLANTING.

Interesting information is to hand in the "Horticultural Abstracts" compiled by the Imperial Bureau of Horticulture, E. Malling Research Station, Kent, England.

Among these are the following:—  
**Results of Widespread Distribution of Aphelinus mali as a Means of Woolly Aphis Control in North Caucasus.**

P. Serdyukov (Russian).

Aphelinus mali gave 80-95 per cent. control of Woolly Aphis (*Eriosoma lanigerum*) in 2-3 years, and, under particularly favorable conditions, in one year after its introduction to the infested orchards in Northern Caucasus. 100 per cent. control has not been obtained in any of the orchards under observation. The advantages of biological control are said to be the following:—(1) It reduces the cost of labor required for chemical treatments and dispenses with the cost of chemicals; (2) it results in increased yields and stimulates tree growth.

**Removal of Spray Residue from Apples.**

Ohio (U.S.A.) Agric. Exp. Sta.

An account is given of washing Apples in the under brush flood type washer using 1 to 1½ per cent. acid solution to remove lead arsenate residues. This type was found efficient especially when the washing solution was heated. The flotation type, though generally satisfactory, was less efficient. The mechanical brush was not found satisfactory. Washing did not injure the keeping quality of the fruit.

**Soya Beans in New Zealand.**

M. A. Black and J. W. Woodcock, in "N.Z. J. Agric."

The question of the economic value of Soya Beans in New Zealand is examined. Although, to quote the authors, a crop from which you can make practically anything from salad oil to gum boots, and which is an important foodstuff for a large part of the human race makes a powerful appeal to the imagination, it is considered that for the following reasons the growing of Soya Beans is not an economic proposition for their country.

A Soya Bean product must replace a crop or annual product that is cheap

(Continued from page 6.)

under the immediate direction of Dr. James Marshall. For the most part mineral oils have been investigated primarily from the standpoint of their utilisation in the new types of inverted-spray mixture coming into use. Because spray oils of medium viscosity produce heavy deposits of insecticide on fruits, frequently difficult to remove, the lighter fractions have been investigated, even though they are known to possess less ovicidal value in Codling Moth control.

Kerosene has been utilised, in conjunction with a suitable soap, as a satisfactory wetting and sticking agent for lead arsenate in Codling Moth control. This was employed alone, and as a diluent for herring oil. Stove oil was found to be a satisfactory substitute for kerosene in similar combinations with lead arsenate for Codling Moth control.

Hydrogenated Cottonseed oil, hydrogenated herring oil or lard may be substituted for herring oil in a herring oil-kerosene or herring oil-stove oil mixture with lead arsenate and still be followed by good results. It is necessary to heat such a mixture in order to effect solution.

or plentiful in N.Z.; prices are not, and never have been low enough to attract manufacturers in the Dominion, nor are they high enough to make it possible for N.Z. farmers to grow the crop. The crop can only be grown in the Maize districts, and even there it is somewhat precarious.

**Bacterial-Canker of Tomatoes.**

Reid, W. D., in "N.Z. Journal of Science," 1938.

A description is given of Bacterial Canker of Tomatoes, the causal organism being *Aplanobacter michiganense* Erw. Smith, a disease of world-wide distribution, but in New Zealand not found until 1936. Control measures suggested consist of soil sterilisation or replacement under glass, avoidance of replanting in infected fields in the open, destruction of diseased plants. It is also said that the spread of the disease can be greatly curtailed by breaking off instead of pinching or cutting laterals when training the plants. Clean seed from a disease-free crop should be used, since the usual methods of seed disinfection destroy only the superficial bacteria.

**Tomato Varieties From Morocco.**

Douglass, J., in "Agric. Gaz. N.S.W."

A Tomato variety from Morocco, Range de Marmande, has proved suitable for growing unstaked on the Central North Coast of N.S.W., where it crops heavily. It belongs to the Chinese group and is a first early-maturing variety.

**The Use of Selenium in Sprays for the Control of Mites on Citrus and Grapes.**

W. M. Hoskins, A. M. Boyce, and J. F. Lamiman, in "Hilgardia."

**A**N EFFECTIVE CONTROL of Mites on citrus and Grapes was obtained in California without injury to the plants by a spray made by dissolving selenium in a solution of potassium ammonium sulphide in such proportions that the composition corresponds to the empirical formula (K NH S) 5 Se.

In view of the known toxicity of selenium to mammalian life, the possibility of any injurious effects to the consumer arising out of the use of selenium-containing spray is very thoroughly discussed. Analyses of treated citrus fruit show that the residue, which is mainly free selenium, is present up to 2 parts per million in the rind, while in the soil after five years of spraying a maximum of 2 parts per million selenium occurred in the first six inches, penetration below this being very slow, and absorption by the tree being almost negligible. In Grapes the residue was somewhat greater, and they are shown to absorb more selenium from the soil. Evidence is reviewed which shows that the absorption of 3 parts of selenium per million in the whole diet caused no injurious symptoms, and it is concluded that the proper use of selenium produces no hazard to public health.

**Present Position of Tung Oil Planting.**

C. Van De Koppel, Bergcultures, Germany.

In view of the diminished supply of Tung oil available from China owing to the Sino-Japanese war, other possible sources of supply are examined. A brief note is given of the degree of success attained in the cultivation of Tung oil in each country in which would-be commercial plantations have been started.

# Oriental Peach Moth

VALUABLE RESEARCH WORK IN THE GOULBURN VALLEY.

**B**ECAUSE OF THE LOSS of Peaches in the Goulburn Valley, Victoria, caused by the Oriental Peach Moth (*Cydia molesta*), the Council for Scientific and Industrial Research has been giving special attention to this subject. Included in the recently issued annual report of the C.S.I.R. regarding the Oriental Peach Moth the following is stated:—

The estimated loss of Peaches due to this pest in the Goulburn Valley district, Victoria, during the 1937-38 season, was five to ten per cent.; it was the lightest for the last four seasons. The outbreak in a circumscribed district in the Murrumbidgee Irrigation Area, New South Wales, remained light in 1937-38.

Throughout the Goulburn Valley there was a high initial population of moths in the Spring of 1937, and moth emergence occurred ten days earlier than had been recorded previously. The abundance of moths increased in the first and second generations until January, 1938, when the peak of numbers was reached. The life-cycle

Particular attention is paid to the British possessions, in most of which attempts have been made to establish plantations. The fact that success has not been remarkable is attributed in many cases to the use of *Aleurites Fordii* instead of *A. montana*.

It is said that if at the outset (1929) these two varieties had been given preliminary trials side by side the greater suitability of *A. montana* for many localities would have been obvious, and a considerable area of bearing trees would now be in existence. America has about 60,000 acres, but damage caused by Spring frosts is always liable to reduce the potential yield.

of the pest, however, was ahead of the development of the trees, so that harvest took place at a time when there was little larval activity. This, combined with the very heavy crop, was mainly responsible for the very light infestation of fruit.

In 1936-37, the spray programme, which was confined to an intensive campaign against the eggs and larvae at a time when the Peaches of the main crop were becoming susceptible to attack, has failed to give satisfactory control in the orchard. During 1937-38, the reasons for this failure were investigated, and evidence was obtained that it was due to—

(a) The failure of sprays to penetrate the clusters of fruit and cover the stem end of the Peach where 90 per cent. of entries are made;

(b) The profuse growth of young Peach twigs, particularly on young trees, which rapidly grow away from any cover spray and leave the tips unprotected;

(c) The habits of the moths which deposit their eggs on unsprayed parts of leaves and stems in close proximity to the tips of young twigs and the fruit; and

(d) The ability of many newly-hatched larvae of recovering from the effects of the nicotine bentonite over which they have crawled from the point of hatching to the point of entry into the host.

Satisfactory control of the pest by spraying is therefore not likely to prove practicable.

Last Spring, two shipments of the Oriental Peach Moth parasites, *Macrocentrus ancylovorus*, *Glypta rufiseutellaris*, *Bassus diversus*, *Diocetes molesta*, and *Ascogaster carpocapsae*, which had been reared in the United States of America, were successfully introduced and bred in the



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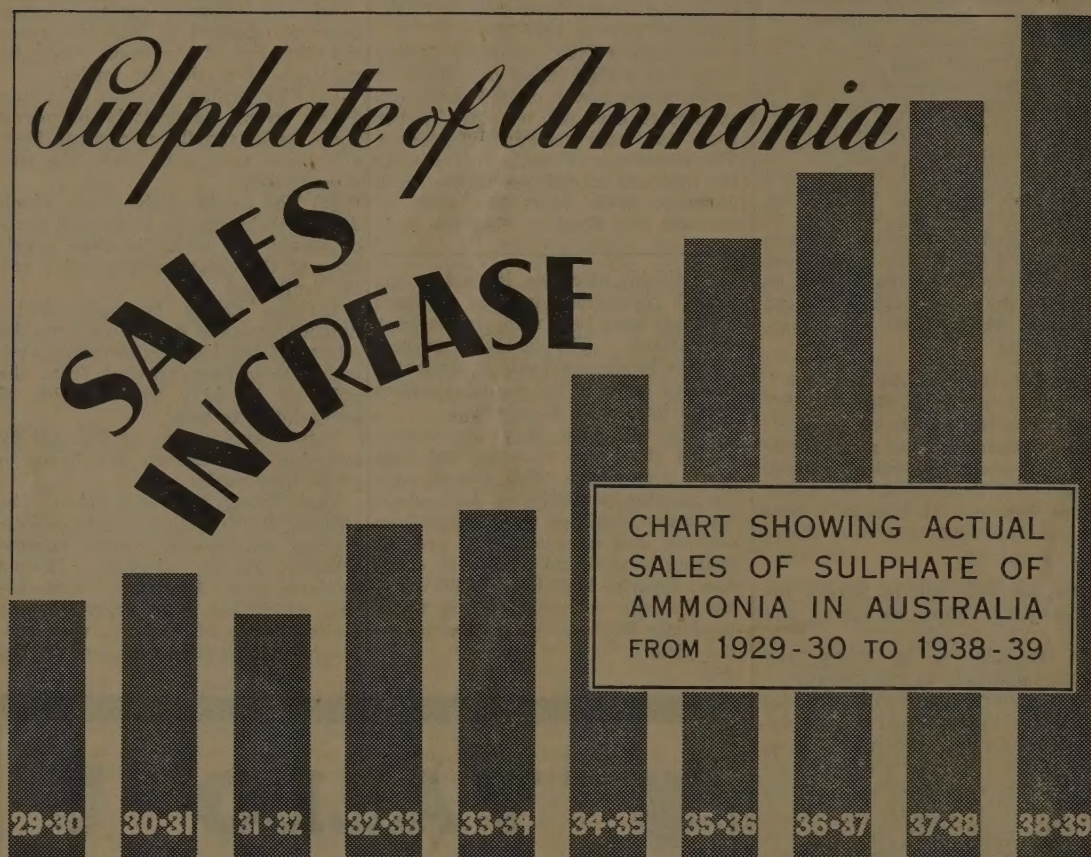
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special insectary at Mooroopna. A total of some 4,000 parasites were liberated in the orchards.

Recoveries of *Bassus diversus* and *M. ancylicivorus* were made from moth larvae collected subsequently in the orchards, but towards the end of the season *B. diversus* appeared to die out. Recoveries of three subsequent generations of *M. ancylicivorus*, however, were made, showing that this species has been breeding successfully in the orchards during the Summer. A small number of recoveries made early in the Spring suggest that it also over-wintered in the field.

The results of the season show that *M. ancylicivorus* is the most promising parasite of the Oriental Peach Moth and additional consignments will be introduced next Spring to ensure that it is given every opportunity of becoming established.

### FRUIT TREE ROOT WEEVILS.

#### Control Measures Described.

**N**OW is the best time of the year to tackle fruit tree root weevils which do more damage than is generally supposed to Orange, Apple, Peach, Plum and some other trees. Place bands round the trunks of the trees, and destroy the insects that collect below them, states the N.S.W. Dept. of Agric.

As their name implies, the pests do little damage to the limbs and foliage of the trees, confining their attention to the roots, where, in a grub stage, they feed voraciously and so retard the growth of the tree, as well as the flow of the sap.

The limbs of infested trees eventually become unproductive and may even die back, in which case a temporary new growth is thrown out from the butts of the trees. If the infestation continues the trees eventually die, and whole orchards may be destroyed where the beetles are allowed to remain unchecked for a number of years.

Growers in districts where the pest is known to occur, are urged to keep a close watch for any indication of the presence of these weevils.

#### Symptoms.

If the trees become thin in foliage, or sickly looking, or if some of the branches are not making new growth, the presence of this pest should be suspected and the trunks of some of the trees should be banded with a sticky tree-banding material, and, if the condition of the trees is due to injury by the larvae of the pest, adult beetles will be found below the band.

The adult weevil is about seven-eighths of an inch in length, grey-buff in color, and has the head prolonged into a typical snout. Although the adults feed upon the foliage and buds of the trees, the damage they cause is of minor importance.

An

#### examination of the roots

of sickly trees will indicate whether the weevil larvae have been at work.

Trees known to be infested, as well as others in the same orchard not showing evidence of infestation, should be banded in order to prevent any adults climbing the trunks to feed and deposit their eggs on the foliage.

The banding material should be applied with a flat stick, in order to form a ring around the trunk about three inches wide and about one-eighth of an inch thick.

It should be applied during the latter half of this month, and the bands will remain effective until all the beetles have emerged, provided the surface is freshened periodically by rubbing with a flat stick.

The weevils which congregate on the trunks below the bands should be

(Continued on page 9.)



# VICTORIA

## Melbourne's "Apple Week"— June 19-24, 1939

AN OUTSTANDING SUCCESS.

**A**LTHOUGH it was originally intended to carry out Apple Week in Melbourne on a limited scale this season, the ready co-operation from city shopkeepers, the press, and radio, the Electricity and Gas Companies, Railway Department, various schools, and others, was so great that the "Week" became an outstanding success.

An idea of the intensive work carried out may be gleaned from the following official programme:—

May 15, Tuesday: 3DB—10 minute talk on "National Fitness," by the Hon. P. J. Clarey, M.L.C.

May 23, Tuesday: 3DB—10 minute talk on "Apple Beverages," by T. H. Kneen, Horticultural Research Officer, Department of Agriculture.

May 30, Tuesday: 3DB—10 minute talk on "Apples and Health," by R. E. Boardman, Secretary, Apple and Pear Council.

June 1, Thursday: 3XY—10 minute talk — Housewives Association (Howey Court), by R. E. Boardman.

June 6, Tuesday: 3DB—10 minute talk on "Apples and History," by J. L. Provan, B.Ag.Sc., Senior Horticultural Instructor, Department of Agriculture.

June 13, Tuesday: 3DB—10 minute talk on "Apples and the Teeth," by Dr. Oscar Behrend.

June 17, Saturday: Committee assembled to decorate baskets.

### Apple Week Programme.

#### Apple Week.

Monday, June 19.

Distribution of baskets to decorate city shops, and special decoration of eight main shop windows: — The "Argus," 243 Collins-street, Melb.; Incleys, 183 Collins-street, Melb.; Law Somner Pty. Ltd., 21 Elizabeth-street, Melb.; Tasmanian Government Tourist Bureau, Block Arcade, Collins-street, Melb.; Myer Emporium, Little Bourke-street, Melb.; Foy-Ackmans, 250 Flinders-street, Melb.; Housewives' Association, Flinders Way, Melb.; Ormond Plant Farm, 266 Flinders-street, Melb.

10.30 a.m.: 3DB—5 minute talk by Dr. Kenneth Skues.

12 noon: 3LO—Official opening of Apple Week by Senator G. McLeay, Minister for Commerce.

1.15 p.m.: Distribution of Apples to pupils of the Emily McPherson College and address by R. E. Boardman. (Lecture Hall decorated with baskets of Apples.)

1.30 p.m.: 3KZ—5 minute talk—W. P. Mair.

2.30-4 p.m.: State Electricity Commission, 238-242 Flinders-street — Cookery Demonstration.

2.30-4 p.m.: Metropolitan Gas Company, 196 Flinders-street — Cookery Demonstration: Apple Scones, Boiled Apple Dumpling.

Tuesday, June 20.

10.30 a.m.: 3DB—5 minute talk, F. Cave.

11.15 a.m.: Broadcast, 3UZ—Victorian Housewives' Association — "Kitchen of the Air"—Apple recipes were described as the work of preparation actually proceeded. Distribution of Apples to Kindergartens.

2 p.m.: Free Public Cookery Demonstration—Apple Dishes in Austria, by Madame Karola Stark, assisted by Miss M. Jose, Head of the Cookery Department, Emily McPherson College of Domestic Economy. The recipes were made available and the public were able to purchase the prepared Apple dishes. Lecture Hall decorated with baskets of Apples.

2 p.m.: Display of Apples at Annual Meeting of Housewives' Association, Howey Court, and distribution of literature. Address by R. E. Boardman.

2.30 p.m.: State Electricity Commission, 238 Flinders-street, Melbourne—Cookery Demonstration.

Wednesday, June 21.

10.30 a.m.: 3DB—5 minute talk—Dr. Roy Cash.

11.30 a.m.: 3AW—5 minute talk—W. P. Mair.

2 p.m.: Public Demonstration in Preparation of Apple Dishes—Footscray Girls Central School.

2.30-4 p.m.: State Electricity Commission—Cookery Demonstration.

2.30-4 p.m.: Metropolitan Gas Company — Cookery Demonstration: Baked Apple Custards, Apple and Pumpkin Pie, German Apple Cake, Sausages with Fried Apple.

2.30 p.m.: Address at Victorian Housewives Association, Flinders Way, by R. E. Boardman—"Apples and Health." Demonstration of varieties followed by Cookery Demonstration.

Thursday, June 22.

10.30 a.m.: 3DB—5 minute talk—Hon. P. J. Clarey, M.L.C.

11.15 a.m.: 3UZ—"Apples and Health" broadcast—Victorian Housewives' Association.

2.30 p.m.: Special Apple Cookery Demonstration—State Electricity Commission, 242 Flinders-street, Melbourne.

Friday, June 23.

10.30 a.m.: 3DB—5 minute talk — "Minerals in Apples," by C. E. Cole, Department of Agriculture.

10.30 a.m.: 3UZ—7 minute talk by Dr. Oscar Behrend.

1.30 p.m.: 3KZ—5 minute talk by Dr. Kenneth Skues.

2.30 p.m.: Metropolitan Gas Company, 196 Flinders-street, Melb., Special request day for Recipe Demonstrations in Apple Dishes.

2.30 p.m.: State Electricity Commission, 238 Flinders-street—Demonstration in Cookery. Distribution of Apples to Dental Hospital.

Saturday, June 24.

9.15 a.m.: 3UZ—10 minutes in Childrens' Session. One-act play, "The Bunnies Party," prepared by R. E. Boardman.

Monday, June 26.

Cookery Demonstration at Metropolitan Gas Company, 196 Flinders-street, Melbourne: Apple Meringue Pudding and Apple Gems.

At the Railway Refreshment Rooms each day special Apple dishes were served, and menus contained Apple slogans.

Demonstrations of Apple Cookery were given to students daily at the Emily McPherson College.

In addition to the broadcasts mentioned above, National Stations gave Apple Recipes in their Women's Sessions.

Neon signs were displayed at Flinders-street Railway Station from June 16 to 23, as follows:—



One of the attractive Apple Week displays in Melbourne,—in Law Somner's window.

"Apple Week—June 19th-24th."

"Apples and Pears for Radiant Health."

During Apple Week special attention to Apple desserts and Apple pastry was given by members of the Caterers' Association (office, 37 Swanston-street, City).

The Victorian Chamber of Catering Industries Bureau displayed baskets of fruit, and printed an article in their publication.

### Cookery Schools.

During Apple Week special attention was devoted to Apples, and literature distributed in cookery classes in the following schools:—Footscray Girls Central School, Brighton Technical School, Brunswick Girls School, Swinburne Technical College, J. H. Boyd Domestic College, Wangaratta High School, Frankston High School, Emily McPherson College of Domestic Economy, Ouyen Higher Elementary School, Williamstown Girls School,

Warracknabeal High School, Ballarat High School and Prahran Technical School.

The Apple Week Committee consisted of Messrs. E. Noonan (Chairman), H. J. Noonan, W. P. Mair, F. Beet, F. Cave, W. A. Thiele, J. W. Aspinall, F. Petty, and R. E. Boardman (Secretary). In addition, there was a fine team of helpers for the decorating of the baskets and deliveries to the shops. These included Messrs. E. Noonan, H. J. Noonan, W. A. Thiele, F. Beet, F. Cave, D. Whitten, J. Baker, W. P. Mair, A. Bull, J. W. Aspinall, J. J. Tully, R. Petty, F. J. Thiele, R. Morris (Department of Agriculture), and the Secretary.

The thanks of the industry are also due to the Department of Agriculture for their valued assistance, the schools which co-operated in the preparation of Apple dishes, and creches and kindergartens which are carrying on the work throughout the year.

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(Continued from page 8.)

collected and destroyed at frequent intervals. The bands should be placed as high as possible on the trees, so that the weevils can be more readily seen, and also to minimise the accumulation of dust and leaves on the bands.



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## Goulburn Valley Notes

ANNUAL MEETING OF NORTHERN VICTORIA FRUITGROWERS' ASSOCIATION — MR. W. YOUNG AGAIN ELECTED PRESIDENT — IMPERIAL PREFERENCE ON CANNED FRUITS — ARBITRATION COURT PROCEEDINGS — PEAR PRODUCTION AND RECOMMENDATION AGAINST INCREASED PLANTINGS — IRRIGATION AND PEST CONTROL — NEW DRIED FRUIT ACTS.

(By Our Correspondent.)

AT THE NORTHERN VICTORIA FRUITGROWERS' ASSOCIATION annual meeting, held on Friday, June 23, Mr. W. Young was again elected President. The financial position of the Association is very strong, £1,000 being on fixed deposit, besides a substantial balance in the current account.

In presenting the annual report, the President stated that the year under review had been a difficult one for the growers of canning fruit, owing to the depressed and overstocked condition of the British market for canned fruits. This was brought about largely by the huge carry-over of American canned Peaches from the 1937 pack.

In addition to this, the industry has been through abnormal climatic conditions—first a most severe drought, with the consequent shortage of irrigation water, and later record rains and floods, with the pressing need for adequate drainage facilities. Many matters of vital importance to members have been dealt with during the year.

It was regretted that the passing of a staunch and loyal supporter of the Northern Association—the late Mr. T. Hughes, Secretary of the Lancaster Association, had to be recorded. His death had been a severe loss to the organisation.

### Imperial Preference.

At the time of the last annual meeting, the President, Mr. W. Young, was in London with Mr. A. W. Fairley and Mr. W. J. Adams, of the Canned Fruits Control Board, to take part in the talks on the revision of the Ottawa Agreement.

As this preference is of vital importance to the existence of the industry, no efforts were relaxed to have the preference granted by Great Britain on imports of Australian canned fruits satisfactorily adjusted.

The heavy depreciation of the U.S.A. dollar subsequent to the Ottawa Agreement being implemented, led to a reduction in the quotations of the principal foreign suppliers of canned fruits to the United Kingdom, and the duty on those fruits, being imposed on an ad valorem basis, reflected a corresponding contraction. The result has been a considerable shrinkage in the margin of preference which was sought by the Australian Government, and which, it is understood, was intended to be

given by the British Government at the Ottawa discussions in 1932.

This partial loss of preference has caused lower sales realisations to Australian exporters than they could have expected to receive if the intended tariff protection had been made fully effective. London realisations have a distinct bearing on domestic market quotations, and in the aggregate the annual loss of revenue to canners and growers must have been considerable.

To rectify this unfortunate position, the canners and growers asked that in lieu of the ad valorem duty of 15 per cent. levied against foreign fruits entering Britain, a duty on a weight basis of 7/6 per cwt. be imposed.

This request may have met with some success, but for the fact that negotiations for a Trade Treaty between Great Britain and U.S.A. was in progress when our delegation was in London, and proposals for the modifications of the Ottawa Agreement to allow an easier access to the British market of U.S.A. canned fruits were freely mentioned.

The position which faced our representatives in London was not so much the difficulty of obtaining an alteration of duty to give Australia added protection, but to hold the 15 per cent. preference which had been in force since 1932.

In view of all the circumstances, the work of our representatives in retaining the existing preferential duty of 15 per cent. ad valorem must be considered very satisfactory.

To further explain just what this 15 per cent. ad valorem duty means to the grower, it can be said that on present London values it represents £4 per ton on the fresh fruit, or in other words, if we lose the 15 per cent. preference and Australian costs remain constant, the grower would have to accept £4 per ton less for his fruit.

### Arbitration Court.

During the year just concluded the Association decided to appoint Mr. P. V. Feltham, of Shepparton, as Industrial Advocate in place of Mr. A. J. Phillips. The Australian Workers' Union have been very active during the past year, and the Executive was summoned to two compulsory conferences at the Arbitration Court. The first was in connection with the "roping in" of growers not previously cited under the old award, and the second was in connection with the new Log served on our members.

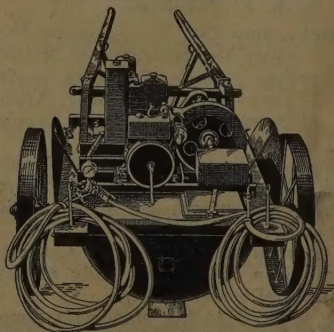
Just recently the Association's case was prepared, and members had to appear before Judge O'Mara in opposition to the claims of the Union. This hearing is still proceeding, and it will be some time before the Judge makes the new Award for the fruit growing industry.

### Pear Production.

For some time negotiations have been proceeding between the Export Pear Committee and Messrs. S. J. Perry & Co., with a view to writing a new contract for a period of years for our export varieties of Pears. This matter has now reached the stage when the Committee is in a position to present to the Association a definite contract for approval or otherwise.

In connection with late export Pears the Executive desires to warn growers against planting further

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areas of these varieties. The 1938 census disclosed that there are 1,562 acres now planted in the Goulburn Valley, which, on a conservative estimate, will be producing in a few years over 350,000 cases of Pears annually.

In view of the growing competition from other countries, chiefly the Argentine Republic, it is considered that further planting will result in an over-supply, with consequent low prices for the fruit.

#### Apple and Pear Export Control Board.

During the year the Federal Government passed the Apple and Pear Organisation Act, which provides for the appointment of a Control Board for Apples and Pears in the fresh state. The Act became necessary owing to the lack of satisfactory organisation in the Apple industry. Pears do not present a problem at this stage.

The Association is pleased to report that the President, Mr. W. Young, was appointed to one of the two positions provided under the Act for grower representatives for the State of Victoria.

#### Irrigation.

Owing to the severe drought, the past year has been an extremely difficult one for the State Rivers and Water Supply Commission and the irrigator.

Throughout the irrigation season the Executive kept in close touch with the position and were able, with the information at their disposal, to materially assist the Officers of the Water Commission in making water available for the orchards at the critical periods of the season.

It is desired to place on record appreciation of the unflinching courtesy and assistance received from all the Officers of the Commission at all times, and to compliment them on the able manner in which a most difficult position was handled right throughout the year.

The question of additional water storage has also been dealt with, and at an early date the Commission will circulate all irrigators asking the amount of extra water right required by each irrigator.

Representations were also made in connection with the 15 per cent. of Water Rights not supplied prior to the advent of rain, and the Commission has advised that irrigators will be credited with this amount on next season's accounts.

#### Experimental Work.

A full report covering important investigational work in the Oriental Peach Moth since its inception has recently been made available to members. It has been decided to continue the work for one more year, and an application for sufficient funds has been made to the Canned Fruit Control Board and the Commonwealth Bank.

The work on

#### Codling Moth

on Pears and Brown Rot of Apricots is proceeding, but final details of the past year's work are not yet available. A full report on these activities will be made available at a later date.

#### Census of Fruit Trees.

A census of fruit trees compiled from figures collected by the Sheparton, Ardmona and Kyabram fac-

ories has been prepared, and each Association has been supplied with copies.

This information is of the greatest value to the industry, and we would impress on all members the necessity of making accurate figures available each year to their respective canneries so that these statistics can be kept up to date.

#### Marketing Dried Fruits.

Although the voluntary agreement between dealers and packers and the various Boards worked reasonably well for the 1937 season, it was realised that this could be regarded only as a temporary expedient. The A.D.F.A., therefore, evolved and carried out a scheme to obtain a controlling interest in those firms which were not previously members of the Association. The sole idea was to ensure that every producer, through the packing sheds, actually exported from Australia the quota, of each fruit as declared by the various State Boards. The scheme was financed by the growers by means of a levy on production, and has been of great assistance in ensuring equity amongst producers and stabilisation of marketing.

#### Publicity.

The Victorian Board allocated \$4,700 for the purpose of advertising all fruits, and tree fruits got their full share in this respect. Most methods of advertising are used in some form, and the continued satisfactory sales of fruit in the Commonwealth proves the value of this phase of the Board's activities.

#### New Dried Fruits Act.

To ensure uniformity of legislation with other producing States, and to correct several weaknesses in the old Act, a new Act was passed in November, 1938. The election of members has been altered slightly: Mildura District elects three, the Swan Hill and Kerang District elects one, and the rest of Victoria elects one member.

The Act also gives the Governor in Council complete power regarding licensing of packing sheds, provides that a shed may be licensed for any one or more named varieties of fruit, and incorporates one or two previous regulations in the Act.

#### Small Prunes.

An Interstate Conference of Dried Fruit Boards agreed that no Prunes which graded more than 120 to the lb. when packed should be marketed. It was intended to introduce this Regulation for 1939, but the very light crop caused by drought, and heavy rains will mean that there will be hardly enough Prunes this year to meet Australian requirements, hence it has been decided to defer action till 1940.

Experimental work in increasing quality by cultural methods is still in progress, also the margin of 3d. per lb. between D'Agen and other varieties has been maintained, as it is felt that this will ultimately encourage the production of D'Agen only.

#### General.

Dried tree fruit producers view with alarm the ever rising costs of production, both in orchard necessities and semi-Governmental ratings, and also in wage award. It must be realised that there is very little margin for the grower at present.

The stifling of international trade due to the policy of intense nationalism, is closing existing markets and making it very difficult to secure new ones. Any material increase in production would therefore present a problem of possibly insurmountable difficulty.

Other matters dealt with by the Association during the year include drainage, opposition to the National Health and Pension Act, Sydney Pear marketing scheme, entry of Dutch migrants to Australia, Saturday afternoon closing of fruit shops in the Melbourne Metropolitan Area, etc.

The value of the loyal and close co-operation of all associations affiliated with the Northern Association has been demonstrated by the sound financial position achieved, and by the influence and prestige attached to all opinions expressed on your behalf by the Executive. Governments and other controlling bodies will deal only with those sections of industry which themselves are properly organised.

The Association looks forward with confidence to growers' full support and active interest.

#### Office-Bearers.

Office-bearers elected were:—President, Mr. W. Young; Vice-President, Mr. J. G. B. McDonald, M.L.A.; Secretary, Mr. S. P. Cornish.

#### SOUTHERN VICTORIAN FRUIT-GROWERS' ASSOCIATION.

The annual meeting of the Southern Victorian Fruitgrowers' Association will be held at the Box Hill Town Hall on July 6, at 1.30 p.m.

The storage of Peaches and investigations made into Apple and Pear diseases will be considered, also the opening hour of the Victoria Market and the sale of fruit on Saturday afternoon and after 7 p.m. on week days will be discussed.

Mr. J. B. Mills, President of the newly-formed Apple and Pear Organisation Board will speak.

#### Pakenham.

A return prepared by Mr. F. Kennedy, of Pakenham, shows that the area between Narre Warren and Drouin has supplied 155,161 cases for the export season just ended—nearly three-quarters of the total for the State. Totals from the various stations in the area were: Drouin, 21,000 cases; Garfield, 2,280; Tynong, 6,176; Bunyip, 4,000; Nar-Nar-Goon, 4,912; Pakenham, 72,000; Officer, 8,000; Beaconsfield, 30,000, and Narre Warren, 6,000.

#### NEW APRICOT VARIETY.

#### Geelong Growers' Applications Invited.

Applications from members of the Geelong District Fruitgrowers' Association who desire to obtain one of the new variety of Apricot trees which the Association is obtaining should be lodged with the Secretary, Mr. S. Hartwick. In making the selection of those who will receive the trees, it is proposed to take into consideration the variation of the soils.

## NEWS IN BRIEF

At the last meeting of the Tasmanian State Fruit Board, a motion was carried asking the Minister to allow a Committee of Appeal against the inspector's decisions.

There is a very apparent need for educational propaganda to educate growers as to the correct time to market some of their varieties. Many are being kept until they are long past their prime.

Because of the good accounts given it in U.S.A. papers, Fenugreek, a new cover crop, was tried out this year in Renmark, but so far does not seem to have lived up to its reputation.

In a recent address before the Barmera Branch of the Agricultural Bureau, Mr. C. Wiedenhofer (Technical Manager at the Renmark Growers' Distillery) stated that he considered we have neglected building up our potash reserves in the soil, in comparison with the general practice adopted in France, when up to 10 cwt. of potash per acre was necessary over a period of three years. He also stated that it was a mistake for any grower to try and produce fruit with only a nitrogenous manure, and urged them, when applying artificial manures, to be sure to get a proper balance.

The C.S.I.R. has been asked to institute a further range of manurial field plots with special regard to larger quantities of potash than those which have been previously used in manurial plots.

From careful microscopical surveys it would appear that the heat waves during the Summer have not affected the buds on Sultana canes, and a high fertility of buds is expected.

In response to the requests of the Wine Grapes Marketing Board, the Water Conservation and Irrigation Commission has now agreed to assist in the prevention of further plantings of wine Grapes, and consequent over-production.

An experiment is at present being conducted on the Murrumbidgee Irrigation Areas for the destruction of weeds in irrigation channels by soil sterilisation.

There is a proposal afoot to store water at Lake Meejum. Preliminary survey work is in progress and when the scheme is completed adequate supplies of water during droughty seasons would be assured to the Irrigation Areas and other water users along the Murrumbidgee.

Growers are reminded to apply tar distillate (1 in 40) as a Winter spray for the control of Green Peach Aphids. If applied properly and at the right time, i.e., when the trees are most dormant, it has been found to provide 100 per cent. control.

So far, 700 tons of canning Tomatoes have been delivered at Griffith for Sydney canners and sauce factories.

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# Dried Fruits News and Notes

## SOUTH AUSTRALIAN DRIED FRUITS BOARD.

A meeting of the S. Aust. Dried Fruits Board was held at Adelaide on June 19, being attended by all members and the Secretary. The audited annual financial statement was adopted.

Considerable attention was given to the question of marketing of Prunes and the alignment of the views, of the Boards of the producing States and of the A.D.F.A. on common grade standards, etc. The Secretary stated that this report on the matter would be furnished to the next meeting of the Consultative Committee, which was arranged for an early date.

The Chairman (Mr. G. A. W. Pope) reported that after conference with the members of the Consultative Committee, the following recommendations for increase in the home consumption quotas for 1939 had since been approved by the Board of each producing State:—

Currants, 14 per cent.; Sultanas, 19 per cent.; Lexias, 50 per cent.; Prunes, 100 per cent.; Peaches, 70 per cent.; Pears, 40 per cent.; Apricots, 77.5 per cent.; Nectarines, 75 per cent.

It was agreed to make the usual award for the Championship Trophy in connection with the River Murray Annual Pruning Competitions, to be held early in July, 1939.

Reports of Inspectors Noblet and Connolly on alleged attempt at unlawful trading were submitted, together with briefs of evidence, and it was agreed to refer the reports to the Crown Solicitor.

Advice was received from the N.S.W. Board on the position of legislation in that State, and copy of the Amending Bill was submitted. It was noted that the measure had passed its third reading in the Legislative Assembly of N.S.W.

## N.S.W. DRIED FRUITS BOARD.

### Reduction of Growers' Contribution.

The New South Wales Dried Fruits Act provides for a contribution to be made towards the cost of defraying the expenditure involved in the administration of the Act and of carrying out the duties and functions of the New South Wales Dried Fruits Board therein.

For the season, 1938, the contribution was fixed at the rate of 5/- per ton.

It has been decided to reduce the contribution for the season 1939 to the rate of 4/3 per ton.

## TABLE GRAPES—A REVIEW OF THE AUSTRALIAN EXPORT INDUSTRY.

By D. G. Quinn, in "Journal of the Department of Agriculture," Victoria.

Some notes of horticultural interest are included in this report. A falling off in production of the table Grape Ohanez in the irrigated areas of N.S.W. and Victoria after the seventh or eighth year is attributed to the absence of flower bunches, an effect to be expected where plants of strong root growth are subjected to heavy pruning and low trellising.

It has been found that yield can be restored and increased by the substitution of overhead trellising 7½ feet high.

This has the effect of not crowding the pruning canes and of admitting plenty of light and air while the Grapes which underhang the foliage are protected from the blemishes caused by sun and wind.

Root pruning by subsoiling is effective when conditions do not justify high trellising.

To secure the best keeping results Grapes should be packed in medium or fine (but not very coarse) cork on the field and precooled as soon as possible. 32 deg. F. is the best storage temperature for Grapes.

Sawdust is superior to cork packing in many ways, but the difficulty has been to find a local wood that will not taint the fruit.

## N.S.W. DRIED FRUITS QUOTAS.

The Consultative Committee of the N.S.W. State Dried Fruits Boards has recommended the adoption of the following revised quotas:—Currants, 14 per cent.; Sultanas, 19 per cent.; Lexias, 50 per cent.; Prunes, 100 per cent.; Peaches, 70 per cent.; Apricots, 77½ per cent.; Nectarines, 75 per cent.; Pears, 40 per cent.

The quotas represent the quantities of the production of the several varieties of dried fruits which may be lawfully marketed within each State.

The Dried Fruits Boards of the several producing States have approved of the recommendation of the Consultative Committee and quotas in accordance therewith will be duly promulgated.

With the exception of Prunes, of which there is a short crop throughout the Commonwealth, owing to adverse seasonal conditions, the above quotas will be reviewed by the Consultative Committee about November next.

## 1939 DRIED FRUITS PACK.

Australian Production, 72,500 Tons.

ALTHOUGH processing of dried fruits will continue for some months because of the necessity for dehydration, the 1939 season's pack of Australian dried vine fruit is placed at 72,500 tons. But for rains it would probably have slightly exceeded last year's record of 90,000 tons.

Already sales to New Zealand have exceeded 3,000 tons, while Canada has taken 13,500 tons. Given normal conditions it is expected that these Dominions will take 20,000 tons this season.

Allowing 15,000 tons for Australian consumption, the total quantity available for the British market will be possibly 35,000 tons, compared with shipments of 57,000 tons for 1938 season.

As the 1938 season's fruit is now practically disposed of, it is anticipated that the disposal of the 1939 harvest will be a much easier proposition. The market for Sultanas rose towards the end of 1938 sales.

The realisation of last season's supply in Britain exceeded £2,000,000, while sales to Canada and New Zealand represented £750,000. Shipments of 1939 season's fruit to Britain to date total 24,917 tons, made up of 12,069 Sultanas, 12,360 tons of Currants, and 488 tons Lexias.

## SALE OF DRIED FRUITS.

### Victorian Proportions for Local Sale.

The Minister for Agriculture in Victoria (Mr. Hogan) has approved the maximum proportions of the various dried fruits which may be marketed within Victoria for the 1939 season as follows:—

Currants, 14 per cent.; Sultanas, 19 per cent.; Lexias, 50 per cent.; dried Apricots, 77½ per cent.; Dried Prunes, 100 per cent.; Dried Peaches, 70 per cent.; Dried Pears, 40 per cent.; and Dried Nectarines 75 per cent.

Mr. Parker Maloney, Chairman of the Victorian Dried Fruits Board, stated it was anticipated that most of these quotas would need only a slight revision toward the end of the year, when a more accurate estimate of the sales for the season could be obtained.

Doctor: You've got a bit of a chill. Go straight home and have a good stiff whisky.

Patient: Er—would you mind letting me have that in writing?

## SETTLERS ON DRIED FRUIT BLOCKS.

### Proposed Interest Reduction for Red Cliffs-Cardross Growers.

THE Victorian Secretary for Lands (Mr. McIlroy), together with officials of the Lands Department and Water Commission, visited a number of blocks in the Red Cliffs and Cardross area recently to investigate proposals for putting settlers on a better financial basis.

The proposal is that the Lands Department should forego 50 per cent. of the interest portion of the annual instalment on settlers' blocks in the Red Cliffs-Cardross area. This is conditional upon the amount being spent on necessary permanent improvements on the blocks.

Figures which were submitted showed that the increase in production of 5,000 tons during the past five years was not due to drainage, but was the normal seasonal increase.

## INTERNATIONAL VITICULTURAL CONGRESS.

Germany, August 21 to 30, 1939.

AN INTERNATIONAL CONGRESS on viticulture is to be held at Bad Kreuznach (Germany) from August 21 to 30, 1939. The problems and the objects of the co-operative societies of wine growers will be dealt with fully in the special sessions of the sections of the conference. Various experts from the different countries present will put forward their findings in pest control.

The Secretary-General of the Conference is at Potsdamer Strasse 101, Berlin, W.35.

## AUSTRALIAN DRIED FRUITS SALES IN GREAT BRITAIN.

The Commonwealth Dried Fruits Export Control Board reports that the sales of Australian dried fruits in Great Britain for the fortnight ended June 22 comprised 917 tons. 242 tons of new season's Sultanas made an average of £40/17/8, 637 tons of Currants £31/4/-, and 27 tons of Lexias £45/7/2 per ton.

Messrs. R. Werner & Co. Pty. Ltd., refrigerating engineers, of 54-86 Burnley-street, Richmond, Victoria, wish to direct the attention of their clients to the fact that their New South Wales agents are now Messrs. Stuart, Walker & Company Pty. Ltd., 174 Clarence-street, Sydney.

## CHEAP ORCHARDS On Mornington Peninsula, Victoria

Splendid roads, undulating country, droughts and floods unknown, only 45 miles to Melbourne Market, average rainfall 30 to 37 inches.

RED HILL is noted for its Apples (colour, flavour, and keeping qualities), Cool Store, Sound Passion Fruit country.

25 ACRES, 12 A. ORCHARD—Jons., Demo's, Stewarts, Granny's, ½ a. Cherries, ¼ a. Plums, concrete Villa, 5 rooms, perm. water, delightful position, opp. State School and P.O. A well kept property, can recommend. £1,450. Terms.

SMALL ORCHARD FOR WORKER—20 acres, 7 a. orchard, Jons., Romes, Demo's, 5 a. grass and clover, all land cleared, House, 4 rooms. Price £600.

60 ACRES, 12 A. ORCHARD—Jons., Romes, Roke, Granny's, Del., Stewarts, 6-roomed W.B. House, 12 a. grass, ¼ mile State School, P.O., perm. water, make good mixed farm, £1,750. Terms. Ill-health only reason for selling. Buy now and secure season's crop.

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# NEW SOUTH WALES

## Murrumbidgee Irrigation Area

PROHIBITION OF ADDITIONAL PLANTINGS OF GRAPES FOR WINE-MAKING — ORANGE EXPORTS TO NEW ZEALAND — EXPERIMENTS IN SOIL STERILISATION — PROJECT FOR WATER CONSERVATION — EFFECT OF DROUGHT ON COVER CROPS — CONTROL OF GREEN PEACH APHIDS — PREVAILING WEATHER CONDITIONS CAUSE LATE HARVESTING OF PEAS AND TOMATOES — PROBABILITY OF HEAVIER CITRUS YIELD THAN EXPECTED.

(By Our Correspondent.)

FOR SOME YEARS PAST it has become increasingly evident that unless wider markets for Australian wines are found, further plantings of wine Grapes should be prohibited. In response to the requests of the Wine Grapes Marketing Board—the Water Conservation and Irrigation Commission has now agreed to assist in the prevention of further plantings of wine Grapes and consequent over-production.

The Commission has decided to take similar action as had been taken to control Rice growing, by limiting the supply of additional water on the Murrumbidgee Irrigation Areas.

The planting of wine Grapes would be practically prohibited, since additional water would not be supplied to any settler who made fresh plantings. This prohibition did not include table Grapes, but included such varieties as Gordo Blanco and Doradillo.

In applying for water, settlers would be required to sign an undertaking that they will not make plantings of wine Grapes during the season 1939 or subsequent planting seasons, and that, in the event of it being discovered that they have committed a breach of this agreement, they will acknowledge the right of the Commission to discontinue the supply of additional water until the unauthorised plantings of wine Grapes or cuttings have been removed.

The Commissioners state that there would be no legal difficulty in connection with this matter, as all additional water would, under the new scheme, be granted for specific plantings, which would not include new areas of wine Grapes.

Mr. J. C. Thorne, Chairman of the Wine Grapes Marketing Board, told our correspondent that on general principles he was opposed to any form of legal restriction of primary production, but some method of curtailing further plantings of wine Grapes was desirable. "In other forms of agriculture," Mr. Thorne continued, "few, if any, legal bars to the sale and distribution of produce exist. Indeed, much legislation has been designed to assist the farmer to sell his products. The sale of wines, however, is hedged around with legal restrictions, especially in New South Wales, where it is not lawful even to serve wine with meals in cafés. Whilst the law exercises a restriction on distribution it is reasonable to invoke the law to restrict production."

### Orange Export.

THE harvesting of Navel Oranges commenced at the end of May, and several shipments from Leeton and Griffith have been made to New Zealand. The Leeton Co-operative Cannery and, the Producers' Distributing Society at Leeton and the Griffith Producers' Co-operative Company are the only packing organisations in the State whose tenders to the Dominion Government were accepted.

The export Oranges are Washington Navels only, as the Thompson Navels were deficient in juice content, which must not be less than 35 per cent., to comply with the Department of Commerce regulations. The crop is lighter than usual, and in consequence the fruit is on the large side, which causes some difficulty in supply-

ing the counts stipulated in the contract, which are 150 s to 288's for the bushel and a third export case.

Thanks to extensive fumigation and the heat wave conditions which obtained in the Summer, there has been a heavy mortality in Red Scale, and the fruit is generally cleaner this season than for some years past.

The packing of citrus fruit is a new activity of the Leeton Co-operative Cannery. The floor space, cool storage, etc., make the cannery building very suitable for this service to growers. The large P.D.S. shed was burnt to the ground last Summer, and this organisation used the Cannery Packing Plant by working night shifts for the first consignment of Navels to the Dominion. On June 15, however, the Society's new packing shed was officially opened, and packing resumed on their premises.

### Soil Sterilisation.

ALWAYS IN THE VANGUARD of new ideas, Mr. Braund is conducting an experiment on his farm in the sterilisation of soils, the immediate and practical object of which is to keep irrigation ditches free from weeds.

He is using a form of arsenic, calculated to combine with soil irons (with which our red lands are generously provided) in such a form that it is not readily soluble. This means that the arsenic in its new form would not easily leach away or be carried by irrigation to crops which it would poison, yet it would be effectively toxic to weeds in the ditch. The experiment is being observed by an Irrigation Commission Research Officer, and will be followed with interest by settlers, as one of the banes of the irrigation farmer's life is the frequent clogging of his channels with weed growth, the clearing of which involves much heavy labor.

### Water Storage.

A MATTER of great interest to M.I.A. fruitgrowers and other land holders is the proposal to store water at Lake Meejum.

The project received attention during the water shortage crises last Summer and when the low level of supplies at Burrinjuck Dam threatened the safety of irrigation farming on the Areas. It is proposed to construct a diversion weir on the Murrumbidgee below Wagga and thence to lead surplus water—not required by the Areas or by water users lower down the river—by channel into Meejum Swamp, a large tract of low-lying country which when filled would store a vast quantity of water, estimated to be almost sufficient for the

Area itself for one irrigation season. From this proposed lake, water would be conducted as required by a canal to the Main Irrigation Canal near Narrandera. Preliminary survey work is in progress, and when the scheme is completed adequate supplies of water during droughty seasons would be assured to the Areas and other water users along the Murrumbidgee.

### Cover Crops.

DURING FEBRUARY and early March—the usual time for sowing green manure crops on the Area—the prospects of water restrictions continuing throughout the Winter caused many fruit growers to refrain from planting Tick Beans (the most suitable Winter Leguminous cover crop).

Then the drought broke and the unprecedented rains caused a heavy growth of Summer grasses and weeds in the orchards, whilst the sodden nature of the soils prevented adequate preparation for late sowing of Tick Beans. Much of the heavy weed growth consists of Summer annuals which would be of little use to pump water out of the soils during the next three months, and in consequence many citrus growers fear that should a wet Winter be experienced, serious water logging may ensue, where ordinarily Tick Beans would have provided the remedy.

One prominent grower, Mr. H. J. Braund, has succeeded in establishing a leguminous cover crop despite the difficulties mentioned. Using 6 lbs. to the acre of mixed Clovers, he broadcast the seed on the surface in amongst heavy Summer grasses and though the soil was not stirred in any way an excellent germination on the surface has been obtained. Further rains early in June has assured him of a good body of Clovers to help minimise possible water logging, whilst if the remainder of the Winter be dry no harm will have been done.

For many years

### Green Peach Aphids

wrought havoc amongst Peach and Nectarine trees on the Areas, and the frequent Spring and Summer sprayings with nicotine sulphate which growers applied were both costly and ineffective. A few years ago, however, it was found that tar distillate (1 in 40), as a Winter spray provided 100 per cent. control if applied properly and at the right time, i.e., when the trees are most dormant. The tar acts as an ovicide and only one thorough application is necessary. As there is a heavy infection reported this year, Peach growers are being warned not to omit spraying before the end of July.

### Late Harvesting.

The weather prevailing up to the time this was written has been most unusual for the district. Instead of our usual frosty nights and clear sunny days there has hardly been any frost, yet, paradoxically, the weather has been bitterly cold. During the first three weeks of June the maximum temperatures recorded at the Commonwealth Research Station, Griffith, on only one occasion exceeded 60 and on three days did not exceed 48 degrees. Dense fogs have been general sometimes not clearing till late in the day. The absence of frost has permitted Tomato and Pea growers to continue harvesting to an unusually late date, and so far 700 tons of canning Tomatoes have been delivered at Griffith for Sydney canners and sauce factories.

### Citrus Yield.

Early estimates for Orange crops on the Area this season indicated a light crop of Navels and a little less than normal setting of Valencia's. However, citrus growers are often unduly pessimistic in their early estimates and the final pickings may reveal a heavier yield than had been anticipated. The majority of bearing trees on the Area are still increasing in size each year, and the grower himself in most cases sees his grove so often that he does not notice the slow but sure increase in diameter of the bearing area of his trees. The additional bearing "surface" provided (by the scarcely noticeable increase of tree diameter of even six to eight inches) is considerably greater than might be expected.

### SEASONAL OPERATIONS IN THE ORCHARD.

Growers who are contemplating planting deciduous trees are reminded in the "N.S.W. Agricultural Bulletin" that the present time is the most suitable for this operation. The bundle of trees, on arrival, may be heeled in for a period of weeks if planting conditions are not quite favorable, but as little time as possible should be lost, because root activity of many varieties will soon commence.

To guard against pest introduction and possibly save subsequent spraying, dipping of the heads of trees in red oil solution (1-20) prior to planting is suggested. All the tree except the root system should be submerged. On planting, tramp the soil firmly around the well-distributed roots and prune the tree limbs severely back.

It will not be seasonable to plant citrus trees until danger of severe frosts is past—usually late in August or September. The preparation of land intended for citrus planting should be continued.

The

### pruning

of deciduous trees should be carried on as rapidly as possible. If any grafting scions are required for subsequent use in early Spring, these should be secured when the varieties are being pruned. The scions should be buried in damp soil.

If applications of lime are intended, they should not be long delayed so as to ensure a period elapsing before nitrogenous fertilisers are applied. As the need for magnesium is often apparent in coastal orchards, dolomite is recommended for application now.

If adverse weather conditions prevent outdoor work, overhaul the sprayer. Spraying will soon be a necessary operation, and as favorable spraying weather is sometimes limited, delays due to breakdown of the machine are very undesirable.

If any section of land requires draining, the work should be completed as soon as possible.



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## Royal Melbourne Show

21st to 30th September, 1939

9 DAYS : : : 8 NIGHTS

The Royal Show which attracted last year over 400,000 visitors provides an unequalled opportunity for bringing the industry before the public.

An excellent classification is provided in the Fruit Section.

All entries close,

**SATURDAY, 19th AUGUST**

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## STEPS to Better Fruit Growing



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## NEW SOUTH WALES - Continued

### COMMISSIONER'S REPORT

COMMENTS ON BANANA BOARD.

IN COMMENTING upon the operations of the N.S.W. Banana Marketing Board, the Royal Commissioner in the Fruit Industry (Mr. J. E. McCulloch) stated that the Bananas proved to be the best organised section of the fresh fruit industry.

Summarising the Board's achievements, he stated that by working in close association with the Banana Growers' Federation, the Board, without any additional cost to growers, provided the means whereby a growers' organisation on behalf of growers, and in growers' interests was able to supervise the marketing of growers' fruit by commission agents; to approve a selected panel of agents; to terminate the canvassing of growers on behalf of agents; to secure a rebate of threepence per case from the ripening fee; to build modern ripening rooms; and to instal a selling floor, which (in a period of eight months) produced a surplus of £2,511/18/7, to the mutual advantage of growers.

Opposition was encountered among growers who opposed the Board was principally on two grounds—

- (a) That their fruit must go into a pool, and
- (b) That they cannot absolutely direct their fruit to a particular agent.

It is stated, however, that this opposition has been fanned by certain interests in the City Markets, who became hostile to the Board for actions taken for the benefit of growers, but which have affected agents' interests.

Upon analysing in detail the complaints of growers who says that pooling is practised because of statu-

tory enactment, it was stated that it could (if considered desirable) be amended to allow the Board to sell fruit on behalf of individual growers instead of through a pool.

Dealing with allegations that growers of good fruit received lower prices through pooling, the Commissioner stated:—

"This objection was not substantiated by evidence... evidence was tendered which established that the pool prices generally equalled or exceeded agents' gross prices."

Criticism that the Board diverted consignments of fruit from Sydney to Melbourne markets, brings forth the comment that this was done "not with the object of depressing Melbourne prices but to regulate and stabilise the two markets."

On the question of the selection of agents, Mr. McCulloch states:—"The policy of the Board has been to allow growers to indicate the agent to whom consignments shall be delivered and, so far as other policy arrangements will allow, the choice of the grower is allowed to operate."

In concluding the report, the Commissioner states:—"Growers should cultivate a spirit of faith in their own organisation, and accept that the efforts of their own representatives will be devoted to the benefit and advantage of growers; they should realise that attacks upon the efficiency of their organisation, the capacity or the probity of their officers are dictated by the self-interest of operators hoping to derive personal advantage and profit from the weakening of the growers' organisation or the dissatisfaction of growers."

### WATER CONSERVATION CONFERENCE.

AT THE INTERSTATE Conference on Water Conservation and Irrigation, held in Sydney, N.S.W., recently, resolutions were passed requesting that a national investigation be made into the question of underground water supplies and matters relating thereto, to be carried out by experts and in which the States and Commonwealth would participate; that the utilisation of the rivers in any border scheme in which more than one State is concerned should be preceded by an inquiry by representatives of the States concerned, and that the Government supply the whole or part of the head-works and main supply works free of any charge against the settlers directly benefiting in any future works.

The Conference also considered that there were a number of schemes in certain States which are beyond the financial resources of such States, and it was recommended that the question of assistance from the Commonwealth be discussed. Conference was also of the opinion that a permanent advisory committee or council, consisting of representatives from each State and from the Commonwealth, should be formed to consider and advise on any problems relating to the conservation and utilisation of water which may be considered of national and interstate importance. It was also considered that in times of shortage, water supply requirements should have priority to the commitments for hydro-electricity where the water conservation scheme was primarily established for water supply purposes.

Other resolutions passed included the necessity for a nation-wide survey of land, water and mineral resources; a comprehensive national topographical survey of Australia; that there should be a periodical consideration of the type of production to be encouraged or avoided in irrigation areas, and the possibilities of products such as Tung oil, Flax, etc.; a fuller collection of rainfall data; that various State authorities be requested to prepare a statement showing the legislation and regulations re issue of water licenses; that in any subdivision of irrigated land, areas should not be smaller than the accepted home maintenance areas for the various types of farms in those States; preservation of catchment areas to safeguard water resources, and that the establishment of an hydraulic and soils mechanics laboratory in each State is a necessary factor for the development of the water resources of the State.

### N.S.W. RAILWAYS DEPARTMENT REQUESTS REVIEW OF EARLIER MARKETING HOURS.

The N.S.W. Railway Department has written to the Sydney City Council requesting that the recent decision to open the City Markets at 6.30 for a trial period of three months be reconsidered, and stating that extreme difficulties exist in arranging for trains carrying perishable goods to arrive in the city earlier than in the past. They further state that earlier running of trains would be strongly opposed in country districts. This request was considered at a meeting of the council's finance committee recently.



## NEW SOUTH WALES (Continued)

### N.S.W. FRUIT ENQUIRY.

#### Hawkesbury Growers Oppose Many Recommendations.

A review of the report of the recommendations of the Royal Commission on the N.S.W. fruit industry has been issued by the Hawkesbury Fruit-growers' Defence Association. This is a lengthy document, and was published in full by the "Area News" (Murrumbidgee Irrigation Areas). The criticisms of the Commissioner's findings are couched in strong language.

The Hawkesbury Defence Association strongly protests against the general spirit of the Commission, saying that such reports merely indicate the personal opinion of those conducting it. It resents any suggestion of "orderly marketing," stating that this was rejected in the last referendum. A Marketing Board is considered a menace to the liberty of the industry, also the "control of plantings to avoid over-production." The proposal to tax orchardists to provide for hail insurance is regarded "as extravagantly fantastic in conception." That too many growers are in an unsound financial position is agreed, but the Association does not consider that further taxation will remedy this. As natural conditions come into the question, it is not feasible to fix any prices for fruit. It is considered that the proposal to issue buyers with numbers and register them would not work, as buyers should be encouraged, and this would not be done under these circumstances. Foresters are not considered particularly harmful, and regulations which would fix a legal rate of commission charges are regarded as merely superfluous. The proposals to fix periods during which the different classes and varieties of fruit may be sold are regarded as "meddlesome, foolish officiousness of the grossest kind." It is considered imperative that a 75 per cent. majority should be necessary before any marketing board could be constituted. The Association is also against non-employment of canvassers by agents. The proposal that the number of farm agents be limited is considered injurious to the industry. Recommendations for a continued long range publicity campaign, the continuation of the orchard tax, and various other proposals are also condemned.

[The views of other readers in this connection would be welcomed.—Ed., "F.W. & M.G."]

#### FREE APPLES FOR SCHOOL CHILDREN.

##### Sydney Propaganda Repeated.

Fruit trade interests in Sydney, N.S.W., recently repeated the scheme launched last year of distributing

Apples to children in public schools in the metropolitan area, with a view to encouraging consumption.

More than 2,500 scholars at Maroubra Bay, Maroubra Junction, Daceyville, and Malabar received gifts of Apples early this month, and were told of the health-giving qualities of fruit. The distribution was arranged by the Chamber of Fruit and Vegetable Industries, the Secretary of which, Mr. P. Macdermott, lectured the children, and made them repeat after him, "The Apple is Nature's toothbrush."

#### FRESH FRUIT FOR THE OUTBACK.

##### Leeton (N.S.W.) Sends 13,030 Cases In Three Years.

Efforts to help outback children suffering from malnutrition have been made by the Far West Children's Health Scheme, and the response to this work by the various branches has been really wonderful.

The Leeton Branch sent 540 crates, containing 22,500 dozen fruit, to isolated places west of the Darling, the north-west and west during the past year for children who never see fresh fruit. The Women's Auxiliary sent £8 to Leeton towards freight, so that travelling clinic trains may have fresh Orange juice for babies.

It was stated that in the past three years the Leeton Branch had sent 13,030 cases of the best fruit, on which freight had cost £135.

At the fourth annual conference of the Scheme, a motion was passed that the matter of free freight for these goods be again brought to the notice of the Government.

The sending of fruit to outback children in Queensland is also attended to in Brisbane, states Mr. J. C. Arkell, Brisbane fruit merchant, who is a member of the committee which attends to this worth-while enterprise.

#### N.S.W. FARMERS VISIT TASMANIA.

##### Tour Greatly Enjoyed.

#### Proposal for Tasmanian Growers to Visit N.S.W.

Recently a party of N.S.W. farmers made a tour of Tasmanian fruit-growing districts. Much appreciation was expressed regarding the information gained and the excellence of the arrangements made by the Tasmanian Government Tourist Bureau, with the ready assistance of the Tasmanian Department of Agriculture.

A proposal is now being considered for Tasmanian growers to visit Sydney to see the handling of their fruit in Sydney. The tour could include a visit to such other places as the Newcastle Steel Works.

## Western Australia

### Record Crop of Apples

#### INTERESTING NOTES FROM BRIDGETOWN.

THE present season has been a record as regards the Apple crop for Western Australia. Upon returning from Bridgetown, where he was packing foreman at Messrs. Paterson's Packing Shed, Mr. S. Lamont reports that approximately 300,000 cases were packed in the Bridgetown district; 87,400 cases (not more than 1,000 of these were Pears) were packed in Paterson's shed, the chief varieties of Apples being Cleos., Granny Smiths, Yates, Jonathans, Dunns, Rokewoods, Statesman, Dougherty and Delicious. About 146,000 cases were shipped through Paterson's shed, including

to the assembly section where it is again stacked in numbered locations. The number of the location is immediately transferred to the "pack out" dockets which are immediately taken to the office. It is claimed that by this method there has not been a single complaint of mixed fruit. The fruit is handled by experts, and one packer packed 235 cases in twelve hours—all grades and sizes.

Growers around this district are fortunate insofar as the big timber country around Pemberton, which is about 34 miles from Bridgetown, supplies all the karri timber used for the making of the dump cases. The



Fruit arriving at Messrs. Paterson's Bridgetown Packing House, W.A.

fruit packed on the growers' own orchards. It is estimated that Western Australian Farmers' packed about 70,000 and Ellershaws and other shippers about 30,000.

A fair idea of the crop may be gained when one considers that although this year has been a record for Western Australia, it is estimated that approximately 35 per cent. of the Bridgetown crop was lost through hail.

Mr. Lamont speaks very appreciatively of the excellent layout of Messrs. Paterson's shed. The fruit is received at one end of the shed and stacked in the raw fruit section, which is put into numbered locations. These location numbers are on all dockets and taken to the packing manager's office. The fruit is then carried on rollers to be graded (Harvey graders) and packed, and is then placed on rollers to be taken

Government State mills are located in this area.

In the areas surrounding Bridgetown there is the Preston Valley, which includes the centres of Donnybrook and Capel. Nearby are Mulalyup, Balingup and Kirrup. Greenbushes is not far from Bridgetown, and all fruit produced there is handled at Bridgetown. Manjimup, besides producing fruit, boasts of one of the most attractive natural swimming pools. Surrounded with flowers, and set in the midst of an orchard, this pool is worth a visit from any caller to this district.

It is of interest to note that the growers of this area take a particular pride in their orchards, and this care, combined with the expert attention received in the packing sheds, results in the production of a pack which can hold its own with any in Australia.

#### APPLE PUBLICITY IN W.A.

An intensive publicity campaign is still being conducted in Western Australia. Many thousands of Apples have been distributed to school children, an exhibit is being arranged in the Department of Industries Exhibition window, cooking demonstrations are being held weekly in Boans Ltd. and Foy & Gibson (W.A.) Ltd., Housewives' Associations and doctors are being contacted, and broadcasts are being arranged. The Publicity Committee is doing excellent work in this connection, and deserves the wholehearted congratulations and thanks of the industry.

#### KENDENUP.

The Apple export season is almost over at Kendenup, the crop being in excess of that estimated. 33,000 cases passed through the packing shed, and almost the same number went to Mt. Barker.

#### MUNDARING.

Most of the fruitgrowers in the Mundaring district have finished packing Apples and Pears for the local and export markets. There has been an extraordinarily good crop, the prices for export Granny Smith having been satisfactory. Many growers have now commenced pruning.

#### MORETON BAY FIG TREES.

##### Breeding Place For Fruit Fly.

The Sydney City Council has acceded to the request of the Department of Agriculture to make efforts to check the Fruit Fly pest, which it is believed breed by the million in the Moreton Bay Fig Trees.

At a meeting of the Dundas Council, the Mayor of Dundas, Alderman F. Spurway, a well-known orchardist, stated that these trees were definitely breeding places for millions of these pests.



Interior view of Bridgetown Packing House showing graders and equipment.



Peach Manurial Trial at Kyabram, Victoria

Success of Sulphate of Ammonia

IN August, 1934, after arrangements with Mr. C. R. Roper, of Harkstead, Kyabram, Victoria, who kindly made available the necessary area of Pullar's Clings, and in collaboration with Mr. F. M. Read, of the Horticultural Division of the Department of Agriculture, the first application of manures was made in one of the most comprehensive and best laidout experiments conducted — up to that time—for that crop.

The objective was to test the effect of two rates of applications of sulphate of ammonia, also that of potash. Superphosphate was applied at the same rate over the whole area and thereupon ceased to be a variable factor. The reasons for thus dealing with phosphate were chiefly that to include it would have added considerably to the work, whilst, whether it were of any direct benefit to the trees or not, some should always be included in the manurial programme if only on account of its beneficial effect upon plant growth in the following Winter.

The treatments were:—4 lb. per tree of super. only; 6 lb. per tree of 2 and 1 super. and ammonia (supplying 4 lb. super and 2 lb. S/A); 8 lb. per tree of 1 and 1 super. and ammonia (supplying 4 lb. super. and 4

lb. S/A); 10 lb. per tree of 2:2:1 (supplying 4 lb. super., 4 lb. S/A and 2 lb. muriate of potash).

Each treatment was repeated six times over the experimental area of 15-year-old Pullars. Each individual plot consisted of six trees, surrounded completely by buffer trees manured in the same way as the plot. Such a layout was designed to eliminate as far as possible chance variations due to such uncontrollable factors as soil changes and tree characteristics.

The manures were spread around the trees, covering almost the whole of the intervening spaces in August each year. At each harvest the fruit was weighed from the individual trees as it came from pickers selected from Mr. Roper's gang. As only sound and mature fruit was sought at each picking, up to three separate picks had to be made on account of the different maturing rates. It is a characteristic of trees and plants which cannot get as much nitrogen as they would like that they hasten the maturation of their fruit. Thus, early-ripening, small fruit is usually a sign of under-nourishment.

Yield records have been obtained for 1935, 1936, 1938 and 1939. In 1937 a high wind arose after the first pick which stripped the trees of much

of the remaining crop, and it was decided to abandon the weighing of that harvest.

The yields of plots at the 1935 harvest, not being influenced by the previous Spring manuring to any extent, have been taken merely as a measure of the degree of uniformity existing between the plots and future yields have been adjusted in accordance with the variations thus found.

The table below shows the average increase in yield per acre over super. only, due to each treatment at each of the remaining three harvests and adjusted as explained above. The costs of the treatments and the average nett monetary returns per acre are also shown.

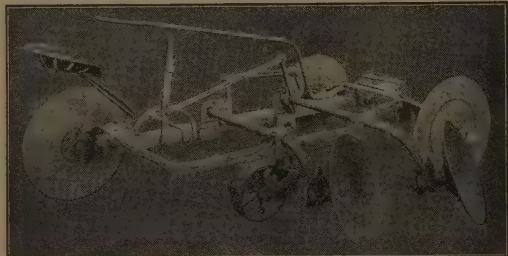
Fertilizer Treatments.	1936. T. C. Q.	1938. T. C. Q.	1939. T. C. Q.	Average. T. C. Q.	Approximate net return per acre. Peach £9 per cwt. Ammonia 12/6 cwt. M/Potash 13/6 cwt.
Super only—					
4 lb. per tree .. ..	6 7 3	11 11 0	6 16 1	8 5 0	
Increases due to:					
2 lb. per tree					
S/Ammonia .. . . .	14 1	11 0	1 11 3	19 0	£7 5 6
4 lb. per tree					
S/Ammonia .. . . .	19 2	13 3	2 4 1	1 5 3	9 3 0
4 lb. per tree					
S/Ammonia and 2 lb. M/Potash .. . . .	18 1	1 15 2	2 7 3	1 13 3	11 8 0

The worth while monetary returns due to sulphate of Ammonia are plainly evident from this experiment, and 4 lb. per tree averaged out as the most profitable application.

The apparent response to potash in the 2:2:1 mixture are also of interest. The extra cost at least has been returned at a profit. An analysis of the yield figures, however, made by Mr. C. E. Cole, of the Department of Horticulture, show that at least another year's results would be necessary before it could be decided whether this plant food is having any very definite effect upon yield or not. Potash reactions probably vary considerably with seasonal conditions, its value being more pronounced in years when sunless days prevail, and vice versa, and, therefore, the longer the

"HILLMAN" ORCHARD STRIP PLOW

Double Furrow



The steering arms are drop forged from the best mild steel and the main wheels are equipped with ball bearings.

Two medium horses can work this machine all day without tiring. A machine may be obtained for a trial at any time.

A sturdy, strong plow equipped with reversible discs to enable the operator to plow up to, or away from the trees. Operated by a single lever and with nothing to catch branches of trees. To facilitate the movement of the plow around the orchard the discs are movable and lift clear of the ground.

Further particulars apply . . .

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GRUBBING?

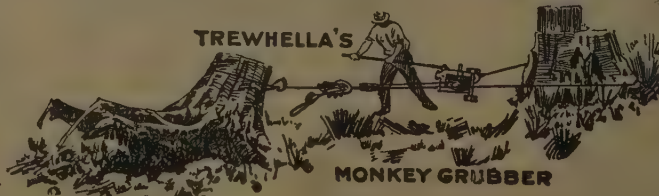
Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features with a host of others, was THE "MONKEY" GRUBBER. It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of firm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

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West Australia.

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N.S.W. BANANA CULTIVATION.

15,808 Acres Under Cultivation.

According to the latest statistics compiled by the Department of Agriculture there are now 15,808 acres of Bananas in N.S.W.

When giving this information, the Senior Fruit Inspector (Mr. H. W. Eastwood) expressed the opinion that this is approximately the maximum area that should be planted to give growers a reasonable return for the labor and capital invested in the industry, provided the acreage in Queensland does not vary from what it has been in the past few years.

The 15,808 acres represented a decrease of 1,769 acres during the year. There had been a decline in acreage in all the Banana district excepting Brunswick where an increase of 254 acres occurred, after allowing for 396 acres destroyed.



# THE CITRUS INDUSTRY

GOOD RESULTS FROM GREEN MANURING — EFFECT OF LEAD ARSENATE AND COPPER CARBONATE SPRAYS IN SOUTH AFRICA — THE PALESTINE CITRUS INDUSTRY.

INTERESTING INFORMATION on many phases of citrus culture in various parts of the world are contained in the "Horticultural Abstracts" compiled by the Imperial Bureau of Horticulture, E. Mallng. Kent, England, some of which are as follows:—

## Some Effects of Green Manuring on Citrus Trees and on the Soil.

By E. S. West and A. Howard, in "Bulletin of the Council for Scientific and Industrial Research."

A THIRTEEN YEAR GREEN MANURE experiment with citrus at Griffith, N.S.W., is here reported.

The growth of a Winter green crop, Tick Beans, increased growth and yield in Washington Navel and Valencia Late Orange trees compared with clean cultivated trees.

The growth of a Summer green crop of Cow Peas at first caused a decrease but after 10 years an increase in growth and yield. Growth of Lucerne offered too strong competition and resulted in decreased growth and yield.

There was a definite seasonal cycle of soil nitrate concentration in the Tick Bean and the clean cultivated plots, the former having a higher annual mean nitrate content in the surface soil, the latter a higher content in the lower lying soils.

Little decomposition took place if Tick Beans were ploughed in too early.

THE soil nitrate cycle was little affected by the presence or absence of citrus. Ploughing in Tick Beans resulted in a rapid formation of ammonia, which persisted in the surface mulch throughout the early Summer. Green manuring depressed the water table during growth. The increase in the water-holding capacity of the soil after several years' green manuring was statistically significant, but practically unimportant. Loss of soil structure, however, noticeable in the clean cultivated plots, was reduced or removed by green manuring.

The following possible explanations of the beneficial effect of organic matter on growth are discussed:—

1. The supply of essential nutrients in a readily assimilable form.
2. Good effect on water-holding capacity and soil structure.
3. The supply of some minor element.
4. The supply of readily assimilable iron.
5. The increase in partial pressure of CO<sub>2</sub> within or above the soil.
6. The formation of growth substances.
7. Direction, nutrition or supply of growth substances through mycorrhizas.
8. Influence on soil micro-organisms.

## The Effect of Lead Arsenate and Copper Carbonate Sprays on the Quality of Oranges.

By R. H. Marloth and F. J. Stoffberg, in the "Journal of Pomology" (South Africa).

SERIOUS PESTS in South African citrus groves are the False Codling Moth (*Argyroplote leucotreta* Meyer), the Mediterranean Fruit Fly (*Ceratitis capitata* Wied.), the Natal Fruit Fly (*Ceratitis* (*Pterandrus*) *rosa* Keh.) and the

American Bollworm (*Heliothis armigera* Hubn. (obsoleta Fabr.)). The present paper reports data obtained over a 4-year period on the effect on quality of Washington Navel Oranges as determined by total soluble solids and acid content of the juice of lead arsenate and copper carbonate sprays.

The trees, worked on rough Lemon, were 15 years old at the start of the experiment. Details are given of the layout, the sprays, their application and the taking of representative fruit samples.

Results are summarized as follows: "Lead arsenate, applied as a spot-spray, at the rate of 1 ounce of lead arsenate per large tree, was responsible for a slight increase in the soluble solids-acid ratio in the juice of the fruit; and when cover-sprays carrying 5 ounces of it per tree were applied, it caused a marked reduction in acid.

"A residual effect of lead arsenate on acid reduction was evident in the two crops following the application of both spot and cover-sprays. The effect of lead arsenate on acid reduction was more marked on the crop of the year following the application of the spray than on the crop maturing at the time of application. No evidence was obtained of any effect of lead arsenate on the total soluble solids in the fruit juice.

"Copper carbonate, applied in 5 cover-sprays at the total rate of 5 ounces per large tree, showed no influence on either the total soluble solids or the acid content of the juice. A slight earliness in coloring of the fruit sprayed with this material was observed.

"Chemical analyses showed that the quantity of arsenic present in the fruit juice following cover-sprays with lead arsenate was negligible. No increase in the lead or copper content of the fruit juice above that normally found resulted from cover-sprays of lead arsenate and copper carbonate."

## The Citrus Industry in Palestine.

By R. O. Williams, in the "Empire Journal of Experimental Agriculture."

THIS IS AN ACCOUNT of the citrus industry in Palestine, and its recent rapid development. Only notes of horticultural interest are abstracted here.

The chief Orange grown is the Jaffa, known locally as Shamouti, and the chief Grapefruit is the Marsh seedless.

A few Tangerines and Lemons are also grown.

The watering is by irrigation, and the salinity of the water is important; 350 mg. chlorine per litre appears the limit for citrus.

In small scale tests rough Lemon rootstocks showed better resistance to salinity than sour Orange or Pomelo.

The tendency among cultivators is to over-irrigate.

It has been shown that a grove 3 years old will give high yields and remain in good condition with water applied at 44 day intervals during the season, a total of 360 cu. m. per dunum (¼ acre) in 3 irrigations. The water is usually applied by the basin or furrow systems.

Free drainage soils predominate in the citrus groves; retentive soils and low-lying groves need drainage or the fruit therefrom is rendered highly susceptible to wastage diseases.

The Necessity for Windbreaks and their favorable effects on yield, soundness and grade of fruit have been established by experiment.

The chief rootstocks are Sweet Lime, on which 90 per cent. of Jaffas are budded, and Sour Orange for Grapefruit and Valencias. On sour stock the Jaffa is later in coming into bearing, more subject to alternate bearing and to suffer from the hot winds than it is on sweet lime. Valencias and Grapefruit are not so affected on sour stock. The Sweet Lime stock is more subject to Gummosis than Sour Orange, and if budded too early to xyloporosis. Various local agricultural institutions are conducting rootstock experiments.

The Jaffa Orange is liable to bud mutation, with the result that orchards often contain too high a percentage of inferior trees.

Close planting in Palestine is prevalent, and leads to much inconvenience in carrying out orchard operations; its advantages are a much heavier yield for the first 15-20 years, a smaller and less coarse fruit, and mutual protection against winds. Spacing trials are in progress. Tillage is regular and systematic.

Planting is often too deep, resulting in losses from root and collar diseases.

It is now usual to allow budded Orange trees to branch at 60 cm. from the ground and Grapefruit and Lemon at 80 cm.

Pruning of dead wood is more necessary in the closely planted groves than in those more widely spaced.

Grove sanitation, i.e., the removal of fallen and/or damaged fruit, is enforced by itinerant inspectors.

Manuring follows no fixed plan among cultivators, but the Horticultural Stations have adopted a routine (which is described) and research on the subject is in progress. Pests and diseases are countered by routine treatment.

The handling of the crop is still primitive compared with other countries in that most of it is only rarely done mechanically and the difficulties connected with the use of a standardised box throughout the industry have not yet been overcome.

The control exercised through the Citrus Fruit Inspection Service has done much to raise the quality of the exports.

## Citrus Fruit Production and Trade in Palestine.

By A. Pascual, in the "International Review of Agriculture."

THE RECENT REMARKABLE developments in the citrus industry in Palestine are traced. The chief Orange grown is the Shamouti (or Jaffa), with a few Valencia Late to prolong the season. The Shamouti is very liable to bud mutation, and to minimise the possibility of these mutations being propagated a close supervision is exercised by the Department of Agriculture on the 250 nurseries of the country, which contain more than a million plants.

The fertiliser formulae most suitable for Palestine soils are different from those of the U.S.A., and ignorance of this fact was in the early days a frequent source of error.

### Manurial Tests.

Farmyard manure is the best organic manure, and among the chemicals nitrate is the most important, both in the nutrition of the trees and as a factor in increase of yield. Following nitrate come phosphoric acid and potash.

Experiments made with fruit conveyed in ships equipped with re-

frigerating plant showed that chilled fruit arrived in England without loss, compared to the 5-7 per cent. loss with unchilled fruit.

Attempts made to establish by-products industries are hampered by the short peak season, only a matter of six weeks. At other times there is insufficient surplus to keep the factories at full pressure.

## CINCTURING ORANGE TREES.

AT A RECENT CONFERENCE of River Murray (S.A.) fruit-growers, the district Horticultural Adviser, Mr. C. G. Grasby, answered the question "Is Cincturing of Orange Trees Successful" as follows:—

Cincturing was an old method, tried in Berri Experimental Orchard since 1924. In Renmark Mr. Grasby had counted 16 to 18 cincture marks on some trees. Undoubtedly an improvement was shown on the crop. Trees must be healthy. If persisted in, energy taken by extra crop must be counteracted by giving extra manure. A test in Waikerie on Australian Navel trees which for some years gave a small return, although trees looked healthy, was as follows: Five trees were used, of even growth. The first tree was not cinctured. The second tree was cinctured on October 27. The third tree cinctured 10 days later. The fourth tree 10 days later than the third tree. The fifth tree was not cinctured.

Harvest: First, 30 lb. fruit; second, 402 lb.; third, 305 lb.; fourth, 252 lb.; fifth, 70 lb. This year appearance seemed to indicate it was not necessary, but lack of irrigation gave results not so good, but better than previously.

"Murray View" this year had two rows uncinctured and they were no different from the rest. Probably a gain on Australian Navel. When extra manure was not given the trees had gone off, however.

Some good results by cincturing have been obtained in Waikerie this year.

## CITRUS GROWERS.

### Meeting of Griffith Producers' Co-op. Co.

At a recent meeting of citrus growers at the Griffith Producers' Co-operative Co.'s packing shed, the following shareholders were re-elected to the citrus committee: Messrs. R. Smythe, G. Smailes, J. W. Melville, and J. N. Thompson.

Last season 165,000 boxes of Navel Oranges and 117,539 boxes of Valencia late Oranges were packed by the company and sold on behalf of growers.

### N.S.W. CITRUS OFFICER TO VISIT CALIFORNIA.

After the recent meeting of the Australian Agricultural Council, the Minister for Commerce, Senator McLeay, stated that an officer of the Department of Agriculture of New South Wales would be sent abroad to investigate methods of producing and marketing citrus fruits in California and other parts of the United States. The cost will be borne by the Commonwealth and the citrus-producing States.

## SPRAYING CITRUS TREES.

Seasonal spraying hints for citrus trees are included on our Queensland page.



# Activities of Citrus Growers

CLAIMS BY A.W.U. — TRADE WITH NEW ZEALAND — SATURDAY AFTERNOON CLOSING IN MELBOURNE SUBURBS — PROSPECTS OF FACTORY PRICES — CITRUS ADVISORY COUNCIL — EXPORT OF WASHINGTON AND THOMPSON NAVELS — WRAPPING ORANGES FOR NEW ZEALAND — ARTIFICIALLY COLORED ORANGES.

Report by A. W. Schwennesen, General Manager, Victorian Central Citrus Association.

THE Australian Workers' Union has submitted a log for increased wages, and the matter is now before the Arbitration Court.

Mr. A. W. Schwennesen, General Manager of the Victorian Central Citrus Association, holds the view that more detailed information of a definite character concerning growers' costs and responsibilities is needed to combat the claim, and growers are being urged to fill in the specimen statement which has been forwarded to them, and if growers have not these particulars readily available it

is suggested that they produce their income tax returns in conjunction with a statement showing the capital cost of developing their holdings. Unless the V.C.C.A. is provided with evidence of this nature they can do very little to protect the interests of growers.

## 1939 Export Season.

Continuing, Mr. Schwennesen stated that the export of this season's Navel from Victoria and South Australia to N.Z. commenced on June 14. Sales of large quantities of Navels for spread delivery June to September, have

already been arranged by South Australia and the Murrumbidgee Irrigation Area, but for the present it is the intention of the N.Z. Internal Marketing Department to buy from Victoria on a boat-to-boat basis. While this system may prove quite satisfactory this year because of the lighter crop, it would be infinitely better if the V.C.C.A. were able to contract for the supply of a definite number of cases early in the season.

One of the reasons why they are not able to make a long-range contract is because many of the growers seem to want to make doubly certain that they are going to preserve their margins above Melbourne parity for each particular boat. However, other growers are prepared to take these risks, if any, and there is a risk that Victoria will be left out in the cold if they do not do likewise. Actually the risks involved can be discounted, as past experience has proved this business to be quite profitable and satisfactory to the industry.

## Trade With N.Z.

It is very satisfactory to note that some understanding has now been effected between the States supplying the bulk of the fruit to New Zealand,

for it is realised that the goodwill of the N.Z. people can only be obtained by the performance of satisfactory service. Part of this service will involve the maintenance of a direct representative of the industry in N.Z. during the export season. In this connection, arrangements have been made by S.A. and the M.I.A. for Mr. C. N. S. Mueller to represent them. It seems certain that Victoria will make a similar arrangement with Mr. Mueller, who carries the confidence of the organisations which he represents. The idea has already been commended by the N.Z. Internal Marketing Department.

## Saturday Afternoon Closing.

Although there have been many misgivings on the part of producers and merchants as to the success of the Saturday afternoon closing of Melbourne suburban fruit shops during the Winter months, the Secretary of the retail fruiterers' association states that the retailers themselves are more satisfied than ever with the Saturday half-holiday. This does not seem to indicate any loss in turnover.

However, in view of the many rumours regarding the shopkeepers' loss of turnover, and citrus growers' misgivings, the V.C.C.A. recently suggested to the Minister for Labor that a plebiscite of retailers should be taken to discover if any shopkeepers were keen to return to the old order of things. The Minister replied that as the change had been brought about as a result of a petition signed by a majority of the shopkeepers affected, in accordance with the Factories and Shops Act, it could only be revoked by a further petition from the shopkeepers. As it seems unlikely that the retailers will present another petition, it remains to be seen whether the Minister can be persuaded to take a plebiscite.

## Factory Prospects.

The Winter Lemon crop will be reduced by 10 per cent. to 20 per cent. compared with last year, and benefiting by last year's experience, growers are therefore advised to watch the market closely, and to take full advantage of it while it is offering returns which show a reasonable margin of profit. No factory price has yet been suggested, but conditions seem favorable to an increase of a pound or so a ton on last year.

In view of the reduced crop of Oranges, some increase in price over last year should be obtained, and both the demand and the price for Grapefruit are expected to show an improvement.

Briefly summarised, it would seem that the crop position in Victoria and the M.I.A. will be as follows:—Navels, down 15 per cent. to 20 per cent.; Winter Lemons, down 10 per cent. to 20 per cent.; Valencia and Grapefruit much the same as last year.

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Among the matters of interest to the citrus industry discussed at the Australian Citrus Advisory Council was the registration of packing sheds.

It was recommended that Section 3, Sub-Section (aa) should be amended by the deletion of the words "prior to the commencement of the season in which the fruit was grown," thus inflicting no hardship on a grower or packer who, for some particular reason, wished to register after the commencement of the season.

Export of Washington and Thompson Navels.

It was generally agreed that Thompsons would not pass even the present juice test, and it would therefore be very unwise to permit Washingtons and Thompsons to be exported as Navels.

## Oranges for Export.

Mr. Carne pointed out that acidity was not an accurate guide to palata-

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# Tasmanian News and Notes

## Tasmanian State Fruit Board

MARKETING IN BRISBANE AND SYDNEY — TOO MUCH FRUIT SHIPPED TO BRISBANE — DAMAGE DURING TRANSHIPMENT — SYDNEY DELIVERIES — PANEL OF SYDNEY AGENTS — GROWERS' COMPLAINTS ABOUT SHIPPING — OFFICER TO BE APPOINTED FOR EXTENDING MARKETS.

THE STATE FRUIT ADVISORY BOARD, at a meeting at Hobart in mid-June, conferred with Mr. H. McKay, Tasmanian Government Marketing Officer in Sydney, regarding the disposal of Tasmanian fruit in that city, and with Mr. J. C. Arkell, Secretary of the Brisbane panel of selected agents, concerning the fruit export trade with Brisbane. There were present: Messrs. D. E. Ryan (Chairman), J. R. Abel, R. H. Thompson, C. O. Smith, T. G. Thompson, J. Bulman, T. Barnaby, and W. H. Calvert, M.L.C.

Mr. McKay said there was no question that fruit was not being wisely marketed in Sydney in many instances. For example, Alexanders had been on the market last week, and Alfristons were still arriving. Condition was of paramount importance, and that was where the weakness was. There had been a big improvement in pack, and slack packing was uncommon. Grading had been very good, but too much fruit was coming on to the market without straw boards. The only fault was the condition of the fruit. Growers did not seem to appreciate the requirements of the trade.

### Too Much Fruit.

Mr. Arkell said agents in Brisbane had several criticisms to make concerning Tasmanian fruit in Brisbane. Certain varieties were arriving too late, with the result that the fruit was opening up in bad condition. Too much fruit had arrived, and he considered 20,000 cases a fortnight was Brisbane's capacity. The market was expanding, and more fruit a head of population was eaten in Queensland than in any other State. If it was desired to maintain a good payable market price, shipments would have to lighten, as there were 70,000 cases in cool store in Brisbane. There was much feeling because of false reports as to crops. Information on this score should be fairly reliable, after the end of March.

In answer to a question by Mr. Abel, Mr. Arkell said there was no preference for any particular box in Brisbane.

**Damage During Transhipment** continued a serious matter, said Mr. Arkell, particularly in so far as Sydney was concerned. It was felt in Brisbane that the shipping companies were not giving them the service they were being paid for. The direct trade to Brisbane warranted a better, more modern, and faster ship. It was believed in Brisbane that there were too many agents there handling fruit on consignment from Tasmania. He believed better prices would be obtained if there were more regular shipments, with a committee handling them. There were about 80 registered agents in Brisbane, handling fruit.

### Sydney Delivery.

Mr. McKay said a somewhat serious position might arise as the result of a decision of the trade in Sydney not to take delivery of fruit from the wharf after 4 p.m. on Monday. This would delay the placing of fruit on the market. The object of the trade was to force Huddart, Parker Ltd., to give better delivery.

Huddart, Parker, he added, had improved the deliveries recently, but that might be a temporary improvement.

It was agreed:—

Huddart Parker Ltd. be thanked for making No. 3 Pier, Darling Harbor, available for the Zealandia's discharge, as this expedited the delivery of fruit, to the advantage of Tasmanian growers.

It was decided, on the motion of Mr. Burnaby, to express to the Minister for Agriculture the Board's appreciation of the valuable work done by Mr. McKay for the fruit industry.

Mr. J. C. Arkell said that if the Board supplied the fruit, the agents would provide space for a Tasmanian display in the fruit section of the Royal National Agricultural Show at Brisbane in August.

## ACTIVITIES OF CITRUS GROWERS—(Continued from page 18).

bility, which should be the real basis of the maturity standards. It was decided to amend the present Regulations on these lines.

It was decided to amend the Regulations, making it compulsory to wrap Oranges for New Zealand.

Although it was considered impracticable to fix a maximum thickness for Orange rinds, it was felt that in the past too much attention had been paid to external appearance, and insufficient to internal qualities. Recommendations were made for amending the present grade standards to permit only the export of sound fruit of high juice content, free from malformations, blemishes not affecting the soundness of the fruit not to exceed 2½ per cent. of the total surface of any particular Orange.

### Mandarin Case.

After some discussion it was finally agreed that no action should be taken in regard to the adoption of a special case for Mandarins, Council deciding to recommend that in the event of the embargo being lifted by New Zealand, permission should be granted for the export of Mandarins in bushel cases.

Some members considered that the practice of

### Artificially Coloring Oranges

should be discontinued, while others could see nothing wrong with it. It was finally resolved that the Citrus Technical Investigation Committee be requested to carry out further investigations, with a view to discovering whether a more satisfactory test for determining maturity could be found.

### Californian Citrus Industry.

The matter of sending a representative to investigate the citrus industry in California was deferred, many members being of the opinion that it would be unwise to send an investigator unless there was some specific problem to inquire into, and report on.

It was generally agreed that the discussion re

### Appointment of Council Members

should be adjourned until the next meeting. Some members believed that the term of appointment should only be for three years, at the expiration of which period State organizations should be given the opportunity of making other nominations.

On the motion of Mr. Smith, it was agreed:—

The Board ask the Minister to allow a committee of appeal to deal with cases of detention of fruit for technical reasons, slack pack, and irregular sizes, the committee to comprise the inspector who detained the fruit, the exporter (or the buyer if the shipment is f.o.b.), and a growers' representative.

### Panel of Agents.

After receiving further information from Mr. H. McKay, Tasmanian Government Marketing Officer in Sydney, the Board agreed to the following motion by Mr. R. H. Thompson:—

With a view to the formation of a panel of selected agents in Brisbane and Sydney, the Board invite recommended agents handling Tasmanian fruit in the two cities to become members of the panel for the purpose of co-operating with the Board to improve the marketing of fruit.

Pointing out that there still was room for improvement in the handling of fruit on the Sydney wharves, Mr. McKay added that the wharf laborers knew there was no claim if the package was not damaged. The dump case has been called the "cast iron case." If a piling came off a Canadian case it was a different story.

### Growers' Complaints.

The Board met a number of Hobart exporters regarding delivery and inspection of, and payment for fruit sold f.o.b.

Mr. T. G. Thompson said many complaints had been made by growers concerning fruit being held in store for two, three, or four weeks, with the result that slackness in the pack developed, and it was detained for that reason, although it had been well packed when sent forward.

It was contended that the fruit should be sent as near as possible on the boat for which it had been despatched.

Mr. J. P. Piggott (Port Huon Fruitgrowers' Co-operative Association Ltd.), said the idea of getting fruit straight on the boats was not in the best interests of the growers of Tasmania. It was considered better to make sure that fruit was satisfactory before sending it away, than to have it arrive in bad condition at the other end.

Mr. L. F. Piesse (C. Piesse and Co. Pty. Ltd.) said much of the trouble on the wharves was brought about because shippers were unable to get satisfactory reports from the growers. Forecasts had proved most unreliable.

Mr. C. Cane (Tasmanian Orchardists and Producers' Co-operative Association Ltd.), asked if there were any instances of payment having been refused growers.

Mr. Smith said it was not so much a matter of payment for the fruit as of payment for repacking consequent on slackness in the pack developing.

Mr. T. G. Thompson said complaints also had been made of the manner in which fruit was handled by storemen.

### Trade with the East.

It was moved that an officer be appointed to undertake the extension of Apple exports to the East, and other new markets.

Mr. Bulman said that trade with the East had been improved by the efforts of Messrs. Abel and J. H. Astell, but there was more that could be done. Most of the trade with the East at present was handled by Sydney agents. To effect an improvement, an officer to supervise the trade was necessary.

In opening new markets, the Board had power to charge a commission on fruit, and with the co-operation of the Government, the commissions should pay for the employment of an officer without any need to draw on the funds of the Board. As well as the Eastern trade, the officer could supervise the development of other markets, such as Scandinavia.

He moved:—

That applications be called for a commercial officer to undertake the extension of the fruit trade to the East, and other new markets, his salary and date of appointment to be fixed at a future meeting.

Mr. Smith seconded.

Mr. Calvert said firms in Sydney bought Tasmanian fruit and sold it in the East under their own labels. The opening gained in India by the Tasmanian delegation would be lost if it were not followed up.

Mr. Abel said he had not seen fruit in the Near East with a growers' label. Cases bore the New South Wales exporter's label.

The motion was agreed to.—"Mercury."

## THE RED JONATHAN APPLE.

### History and Origin.

By P. H. Thomas, Chief Horticulturist, Tasmanian Dept. of Agric.

DURING RECENT YEARS this full-colored red sport of the Jonathan variety has caused a lot of interest amongst growers, and scions have been eagerly sought after for grafting purposes. This Apple is one of the most popular finds of the last decade and is now well established amongst the State's commercial orchards.

This "sport" originated on Mr. N. Turner's orchard at Lilydale, and was first noticed by him in the year 1920 or 21, when it was a short lateral bearing a cluster of fruit. During the two following seasons growth in the lateral was encouraged, and it had by 1923 developed into a fairly strong secondary leader. In 1923, a few trees were propagated, one of which was planted in the garden of Mr. H. A. Turner, Horticulturist, stationed at Launceston.

About 1926 the late Mr. W. C. Page visited Launceston and saw the tree then bearing a few Apples. It was considered it would be a particularly suitable type of Jonathan for those parts of the Huon Valley, where tree growth is strong and color of fruit not always good. A season or two later Mr. Page obtained a few scions which he grafted on to trees in his own orchard and from these a good number of trees have been propagated.

As the tree at Lilydale on which the sport first appeared was afterwards destroyed, the one growing in Mr. H. A. Turner's garden is the tree from which scions of this particular "sport" have been distributed.

As the Apple became known, requests for scions were received and a good many have been distributed in various parts of the State. This season, requests for scions have been received from New South Wales.

The general opinion of this "sport" is that on strong soils or where, by reason of stocks used, tree growth is vigorous, it should be much preferable to the ordinary Jonathan. On the other hand, if grown on lighter soils or where tree growth is weak, there is perhaps a danger that the fruit would become too dark in color at maturity.



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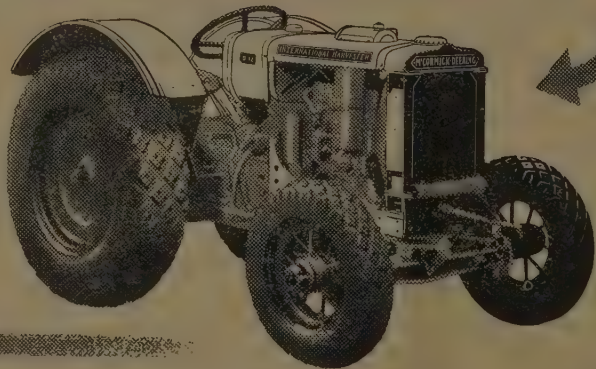
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## Tasmanian Orchard Notes

APPLE AND PEAR EXPORTS TO JUNE — SCALD AND LENTICEL ROTTING — CLEANING UP THE ORCHARD — PRUNING — PACKING CLASSES IN PROGRESS — GROWTH OF OTHER FRUITS.

THE Tasmanian Minister for Agriculture (Mr. R. Cosgrove), received the following (May-June) report from the Departmental Chief Horticulturist (Mr. P. H. Thomas).

### Weather, Crops and Storage.

Tasmania has been experiencing heavy rains and floods occurred in many areas; the changed conditions were, however, generally appreciated, as cover crops have made good growth and cultivations have commenced.

Exports of fruit up to the middle of June were as follow:—

Overseas: Apples, 2,831,910; Pears, 209,251.

Interstate: Apples and Pears, 943,050.

Harvesting has been practically completed, and cool store reports show that at the first week in June approximately 368,000 Apples and 50,000 Pears were held under refrigeration. A quantity is retained in growers' sheds under ordinary storage conditions and is already being cleared.

After the heavy rains and during the latter part of the Autumn, Sturmer, Cleo., and certain other varieties suffered from a form of scald and lenticel rotting which reduced marketable quantities somewhat. Quality throughout this past season has been good, and little loss occurred through black spot. Drying factories are now operating but some difficulty has been reported in procuring the requisite quantities.

### Cleaning Up.

With the completion of harvesting operations growers should now give all packing sheds a thorough clean up, collecting and destroying diseased fruit and ensuring that all codling moth pupae, etc., sheltering in and around the shed, are destroyed. Picking cases too, must receive attention, temporary immersion in a cauldron of boiling water being recommended. All tree props should be collected and examined, pupae being killed if present. Bark scraping of trees and the removal and treatment of codling moth bandages can also be profitably attended to at the present time before pruning and spraying commence in earnest.

### TASMANIA.

#### Orchard Cool Store.

Calvert Bros. Erect New Building.

Messrs. C. H. and G. D. Calvert have recently erected a new cool store and packing shed on their property at Waterloo (Tas.), believing that Apples could be dealt with for less than 6d. a case in a home store, compared with a general charge of 1/3.

The plant is described as of the modern, fully automatic type. Two new features have been included. The gas employed in the circulatory system is methyl chloride, and, instead of the cooling grids being ranged round the chamber walls and taking up considerable space, as in most gas-circulatory systems, two small coils are located on the ceiling of each chamber, and air circulation is maintained by means of fans fitted behind the coils. The stacking arrangements are so disposed as to secure the maximum effects from the movement of cool air. There is automatic control of temperature.

#### Shavings for Insulation.

Insulation was given special attention. The walls, floors, and ceilings

### Pruning

of early varieties is reported to be under way in one or two districts, but in most cases the trees are still carrying a quantity of foliage, owing to lack of severe frosts. Branches or trees affected with "die-back" can now be removed with advantage; by doing this now the spread of this fungus will be restricted.

### Packing Classes.

Regular packing classes have now commenced in the schools situated in fruitgrowing centres and all the pupils are showing keen interest in their work. The present lists supplied by the instructors show that 54 centres are being regularly visited with almost 1,000 pupils in attendance.

### Other Fruits.

Apricot growers are now pruning their trees, and though younger trees are still holding many leaves, good progress is being made.

Young Peaches have in some instances recommenced growth following recent rains, but pruning should be proceeded with.

Raspberry plantations have been pruned earlier than usual. It is possible that this combined with the smaller and harder cane growth will result in very much less disease and good healthy crops next year are anticipated.

Growth on Black Currants is also smaller, but stouter than last year; with this fruit crops may not be so heavy, much depending however, on conditions during the forthcoming season.

The heavy rains have retarded work amongst Strawberries and washaways have caused some loss and damage in recently planted beds, more replanting and patching may therefore be necessary in September.

Stocks of Royal Sovereign grown this year by the Department of Agriculture are now exhausted and no more will be available until 1940.

Applications for registration under the Apiaries Act, continue, but from lists supplied by the District Inspectors, a large number of people owning bees have not yet complied with the requirements and are therefore leaving themselves liable to the penalties prescribed under the Act.

of the chambers are double, 18in. thick, and packed tightly with shavings.

There are three chambers with a total capacity of 8,000 cases, and one small chamber is reserved for 1,200 Pears.

Around the building there is provided ample space for storing boxes for packing; in fact the layout has been so designed to permit of the complete work of grading, packing and storing to be efficiently attended to.

#### School Packing Classes.

#### Fruit Sent To Sydney.

APPLE PACKING CLASSES are now in full swing in Tasmania, and much enthusiasm is being displayed. A consignment of fruit packed entirely by pupils of the Geeveston Area School was recently despatched to Sydney. The fruit was donated by the Parents and Friends' Association and packed under the supervision of Mr. R. A. Chapman, instructor for the Geeveston Area. It is intended that a further consignment will be sent.



TASMANIA—(Continued)

General Notes

PRUNING AND MANURING IN PROGRESS — REQUEST TO MINISTER FOR COMMITTEE OF APPEAL AGAINST INSPECTOR'S DECISIONS — ALLEGED HARSHNESS IN DETENTIONS THIS SEASON — INCREASING DIFFICULTY IN OBTAINING CASES — SOME VARIETIES BEING KEPT TOO LONG BEFORE BEING FORWARDED TO THE MARKET — REMARKS ON THE NEW SOUTH WALES ROYAL COMMISSIONER'S REPORT.

By Our Correspondent.

PICKING IS FINISHED except in a few very late places. The weather for the past month in the north has been on the wet side. In the south it has been milder than usual for the time of year, with enough rain to wet the subsoil. Pruning has commenced in a lot of orchards, and the cover crops where this practice is adopted are looking well, but need a bit more growth before being ploughed under.

Those who believe in Autumn Manuring are putting it on. There is still a diversity of opinion on the comparative merits of Autumn versus Spring sowing of manure. The complete manures appear to be the favorite again this year. Where used in conjunction with green manuring the artificials certainly give good results.

The Cider Works have finished crushing for the season. The evaporators and canning works are still in full swing.

The cool stores are pretty full, but the mainland markets should be able to absorb all available supplies at payable prices.

Shed stored fruit will soon be finished, which will allow the market to rise. The cabled reports from overseas markets indicate fair prices, but not quite so good as might have been expected taking everything into consideration.

Mr. Herbert McKay, Tasmanian Government Marketing Officer, returned from Sydney last week to confer with the State Fruit Board on matters relating to that market.

Mr. Arkell, from Brisbane, also came over on a similar mission.

Committee of Appeal. I notice in the "Mercury's" report of the State Fruit Board's last meeting that a motion was carried asking the Minister to allow a Committee of Appeal against the inspector's decisions in cases of a technical nature. There have been many detentions this season for so-called slack pack, many of the lots detained weighed 45 lbs. net.

Irregular sizing and incorrect packing were also treated with undue severity in some instances, as variations of 1/16th of an inch under the new chart may be considered irregular sizing or incorrect packing.

Some of the detentions for over ripeness appear to have been injudicious, to put it mildly. I saw two lots stopped for this reason that would, in my opinion, have carried to London and back. Complaints are apparently so general that the Fruit Board considered that a Committee of Appeal was advisable.

Trade With The East. Supplies of Apples suitable for India and the East have been rather scarce this season.

Case Problem. I understand that imported pine boxes are likely to be a little dearer next season. The box supply question is getting serious, for as we become more and more dependent on the imported article the price has a tendency to rise. There is also the risk that supplies might be cut off in the event of war.

With regard to the Interstate Trade, growers are making the usual mistake of holding mid-season varieties too long, with the inevitable consequence that the agents complain that fruit is arriving soft. It would be very difficult to frame regulations to meet this position, owing to the wide range of localities growing the same varieties, but something could be done in an educational way to reduce the evil.

I notice the N.S.W. Royal Commissioner's report deals with this question, but I am of the opinion that his suggestion is unworkable.

Neither would his suggestion to prohibit the sale of cool store fruit after the end of October (except Democrat) meet with much support, as there are other varieties that keep well and sell well right into November or later. There are, on the other hand, some varieties that it is foolish to keep even as late as October 30. This, too, is a matter for education more than regulation.

The recommendation to allow Canadian Apples into Australia during November and December is not likely to find favor with the growers unless Canada would reciprocate and allow ours into Canada in their "off" season.

The suggestion to provide an export bounty on Apples and Oranges is not likely to be unpopular with exporters, but if granted the Government would no doubt impose severe restrictions. The suggestion to prohibit the employment of canvassers and local agents is, I think, a good one.

Obituary. The event of most general importance this month was the death of the Premier, Mr. Ogilvie, and all sections of the community realise that Tasmania has suffered a serious loss, and the Labor Party an irreparable one.

HIGH QUALITY ORANGES.

Owing to the abnormally dry and hot weather conditions in the early part of the year, during which a lot of pests were killed, and the heavy rains which followed, it is considered by Mr. G. K. Kerr, Melbourne Market Manager of the Federal Citrus Council, that the present consignments of Oranges coming on to the market are superior in quality and juice content to arrivals at any similar stage of previous seasons.

Applications are to be called for by the Tasmanian State Fruit Board for a commercial officer to undertake the extension of the fruit trade to the East and other new markets.

Phone: After hours: Epping 96. Epping 58.

CANNED FRUIT NEWS

Australian Canned Fruit

SHIPMENTS FOR FIVE MONTHS.

Australia's canned fruits exports from January 1 to May 31 were 5,754 cases lower than for the corresponding period of 1938.

The Australian Canned Fruits Board reports that exports amounted to 809,639 cases, compared with 815,393 cases last year. Of this amount 750,149 (747,044 cases) were shipped to Great Britain.

The following is a summary of exports to date:—

Country.	Apricots. Cases.	Peaches. Cases.	Pears. Cases.	Fruit Salad. Cases.	Pine-apple. Cases.	Total. Cases.
U.K. . . . .	90,786	412,568	225,675	77	21,043	750,149
N.Z. . . . .	4,775	12,050	819	32	476	18,152
Canada . . . . .	3,701	14,190	1,522	1,448	9,073	29,934
East . . . . .	1,256	4,054	2,732	455	33	8,530
Misc. . . . .	355	788	1,130	57	544	2,874
Total . . . . .	100,873	443,650	231,878	2,069	31,169	809,639

Tinplate Manufacture

GROWERS STATE VIEWPOINT BEFORE THE TARIFF BOARD.

Mr. W. Young, in giving evidence before the Tariff Board, said he was President of the Northern Victorian Fruitgrowers' Association, and Secretary of the Australian Canning Fruitgrowers' Association, whose membership of 1,500 fruitgrowers comprised 98 per cent. of the canning fruitgrowers of Australia. This embraced Shepparton, Ardmora, Tatura, Merrigum, Lancaster, Bamawm, Kyabram, Toolamba and Tongala in Victoria, and Leeton, Griffith, Yanco and Yenda in N.S.W.

Practically the whole of the canning Peaches and Pears and Apricots, continued Mr. Young, are grown in the inland irrigation areas of the Goulburn Valley and Murrumbidgee, and since the establishment of fruit growing in these districts towns have grown up and the population of the inland areas has been vastly increased. One instance is the Shepparton district, where nine farmers previously held the land, which now supports 265 growers and their families.

Small Holdings.

The fruitgrowing industry consists mainly of small holdings, according to the Migration and Development Commission report (page 9). Only 47 growers held blocks over 30 acres in extent in the Goulburn Valley and in the Murrumbidgee Area, according to the same report, and only three growers held over 25 acres. The 702 growers in the Goulburn Valley employ 1,300 permanent men, besides a large number of seasonal workers for harvesting, for which the exact numbers cannot be accurately ascertained. The 706 growers in the Murrumbidgee Area employ 700 permanent men and likewise a large number of casual workers during the busy period.

The industry works under an Award of the Federal Arbitration Court governing standard wages and conditions for the employees.

Increasing Costs.

In recent years growers have experienced great difficulty in meeting

their expenses owing to increasing costs and lower prices obtainable for canned fruits occasioned by severe competition from California on the London market.

Anything that might be done which would result in the growers receiving less money for their fruit would be disastrous to the industry.

In the investigation of the Development and Migration Commission, according to their report, page 65, it was found that any price less than £9/10/- per ton would not enable the grower to live and meet his obligations. Since this report was published in 1929, costs have increased materially, and in the season just passed, the prices averaged only £9/2/- per ton spread over three varieties, viz., Peaches, Pears, and Apricots.

In arriving at the price that can be paid to the growers for their fruit, canners take into consideration their fixed cost of labor, cans, cases, labels, etc., and after allowing for exchange and sugar assistance, the difference between costs and realisation determines the price the grower receives. Thus, any diminution of preference, or increase in canner's cost reflects directly on the grower's price, as this is the only item of cost which the canners can cut down.

British Tinplate Used.

"During the discussions on the recent review of the Ottawa Agreement," stated Mr. Young, "great emphasis was laid by my Association on the fact that Australian fruit canners use only British tinplate, as a reason for an increased margin of preference in Britain for Australian canned fruits against foreign competition. The Association now fears that the establishment of the tinned plate industry in Australia might jeopardise the Empire preference without which the industry could not carry on.

"The preference of 15 per cent. on present values in London means £4 per ton on fresh fruit, so that if this

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CANNED FRUIT NEWS—Continued

preference were removed, growers could only receive £5/2/- per ton, and would either have to get immediate assistance from other sources or go out of business."

3,400 Families Involved.

The permanent livelihood of 3,400 families of fruitgrowers and orchard workers is directly dependent upon this industry, quite apart from the earnings of seasonal workers employed in harvesting the crop. In addition, large numbers of employees are engaged by the various canneries in the processing of the fruit.

IMPERIAL FRUIT SHOW.

Exhibits from Australia Can Include Apples, Canned Fruits, Honey and Apple Juices.

THE Imperial Fruit Show will be held this year at London, from November 13 to 18. The classes open for competition from Australian producers include Apples, canned fruits, honey, and Apple juices.

In the canned produce section exhibits may be drawn from commercial stocks either in England or Australia at the option of the exhibitor.

Exhibits in the honey section may be sent direct to the show, and pure fruit beverages should be sent to J. Lyons & Co. Ltd., Hammersmith-road, London, W.14, to reach their destination by October 24. Those intending to forward exhibits from Australia should advise the Department of Commerce, Canberra, as soon as possible, so that a competitor's number may be allotted them and the necessary labels forwarded.

The associations must oppose the granting of any form of assistance to establish the manufacture of tinplate in Australia unless it can be arranged so that it will not in any way prejudice the interests of the canning fruit industry. Should, however, assistance be granted to establish the industry, the subject of this enquiry, and the position of my members be prejudiced thereby, my Association would be forced to ask the Government to make good, by way of bounty or other form of assistance, such loss as may be sustained.

Entry forms, together with the necessary entry fee (to which should be added an amount to cover the cost of exchange at the current rate) should be forwarded to the Department of Commerce, Canberra, before September 6 next.

PACKERS' WAGES.

By the amended determination of the Storemen, Packers, and Sorters' Wages Board, which came into force on May 5, changes have been made, although there is no general increase in wages. The minimum wage of 82/- for male adults has been increased by 2/-, and the minimum wage of 46/3 for female adults increased by 1/-. Certain rates for seed stores and machinery stores have been increased, and alterations made in the weekly hours for persons employed in retail establishments. The time-rate clause has been deleted from the determination, but the new provisions include the principle of weekly hiring, payment for holidays and rates for casual work.

PRESERVATION OF FRUIT AND VEGETABLES.

RESEARCH WORK on the preparation and preservation of fruit and vegetables was attended to on an enlarged scale by the New York State Agricultural Experiment Station (Geneva, N.Y.), according to their recently received 57th annual report.

It is pointed out that there is great public interest in this enterprise.

This research work has resulted in the development of improved processes of preparing Rhubarb and Cherry juices, and, in co-operation with the Division of Bacteriology, a superior process of preserving Apple juice. The last-mentioned procedure involves the de-aeration, flash pasteurisation, and immediate canning of the hot juice. An improved process of making sweet wines and sherry was perfected and has recently been adopted by an important New York State winery. Other important researches on fermented beverages were carried out in co-operation with the Bacteriology Division and the United States Bureau of Chemistry and Soils.

Studies of the Vitamin C content of vegetables have indicated that Broccoli and Cauliflower are extraordinarily rich sources of this vitamin. Other vegetables studied included Tomatoes, Endive, Parsnips, and Muskmelons. The Vitamin C studies were extended to include Tomato and other juices. The principal cause of loss of this vitamin from bottled Tomato juice was shown to be the action of air in the head-space of the bottles.

A simple method for making maraschino Cherries in the home was worked out. A method of making good maraschino Cherries from the Montmorency variety was found.

The studies of the Freezing Preservation of Vegetables

have indicated the importance of low storage temperatures (0 deg. F. or lower) in conserving the Vitamin C content and flavor of frozen vegetables. Improvements in commercial processes of preparing vegetables for freezing have also been suggested. These changes of procedure will improve the vitamin potency of frozen vegetables.

Studies of the pectic enzymes of Tomatoes have indicated how this fruit may be handled and processed so as to prevent loss of viscosity or body.

In co-operation with the Vegetable Crops Division, studies of the relation between chemical composition and quality in vegetables have been carried out. For the past year this work has been concerned chiefly with quality in the newer varieties of Sweet Corn and Tomatoes. Much work has also been carried out in an effort to find a simple physical or chemical means of determining maturity of Green Peas.

We are in receipt of a bulletin entitled "Rubber Tyred Farm Tractors," by Warren S. Lockwood, and issued by the British Rubber Publicity Association. The booklet deals with the economic aspect of the use of rubber tyres on tractors and horse-drawn vehicles used on the farm in various countries, particularly U.S.A. and England.

Motorist: "Will half a crown compensate you for that hen I just ran over?"

Farmer: "Better make it five bob. I've a rooster that thought a whole lot of that hen, and the shock will kill him."

RAPID DEVELOPMENT OF FRUIT JUICE INDUSTRY.

Increase from 1,000,000 Cases in 1929 to 24,000,000 Cases last Year.

RAPID GROWTH of the fruit juice industries in U.S.A. during the past nine years, from a production of little more than 1,000,000 cases in 1929 to about 24,000,000 cases during the last year, is one of the amazing changes in the fruit industry.

"America drinks its fruit," says Gordon Ockey of the Federal Bureau of Agricultural Economics, reporting that "during the fiscal year 1937-38, the American people probably drank 80,000,000 gallons of canned fruit juices, not including sizable quantities of sweet Apple cider, more than 50,000,000 gallons of canned Tomato juice, and about 60,000,000 gallons of wine made from Grapes produced in this country."

Ockey says that prior to 1929, Grape juice and sweet Apple cider were the only unfermented fruit juices consumed in significant quantities. Little Tomato juice was then consumed, and commercial production of Grapefruit juice, Pineapple juice, Orange juice, Lemon juice, and various fruit nectars was yet to be developed. In contrast, almost 24 million cases of fruit juices and more than 16 million cases of Tomato juice were packed last year.

Citrus Juices Lead.

Citrus juices comprised about one-half of last year's high record fruit juice pack, with Grapefruit juice making up about three-quarters of the citrus juice pack. Nine years ago, the domestic pack of canned Grapefruit was only 174,000 cases; last year, it was 8,800,000 cases.

Only 38,000 cases of Orange juice were produced at the beginning of the current decade; last year the production was 1,700,000 cases. Largest increases in the citrus juice output have occurred since 1933-34 — from 1,000,000 cases in that season to nearly 12,000,000 cases in 1937-38.

Pineapple juice was practically unheard of in this country as recently as five years ago. In that season, 1,000 cases were received from Hawaii. The following season, receipts of Pineapple juice jumped to 1,600,000 cases. Last year, the receipts totalled 8,800,000 cases, comprising about one-third the total supply of canned fruit juices.

Nectars also Made.

Ockey reports that in the past few years juices made from dried Prunes, Loganberries, Cherries, Raspberries and Strawberries, and nectars made from Apricots, Peaches, Pears, and fresh Prunes, have been produced in increasing quantities.

Increased production of juices is attributed to two factors:—

1. Increased consumer demand for juice products, probably due largely to a general appreciation of their convenience for use as breakfast fruits, dinner cocktails, and in mixed alcoholic drinks;
2. Increased supplies of fruit resulting in the necessity of increased diversion of fruit from the fresh market by by-product use.

—"Better Fruit," U.S.A., March, 1939.



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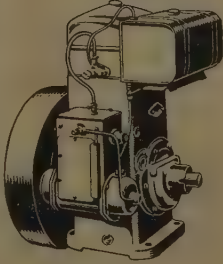
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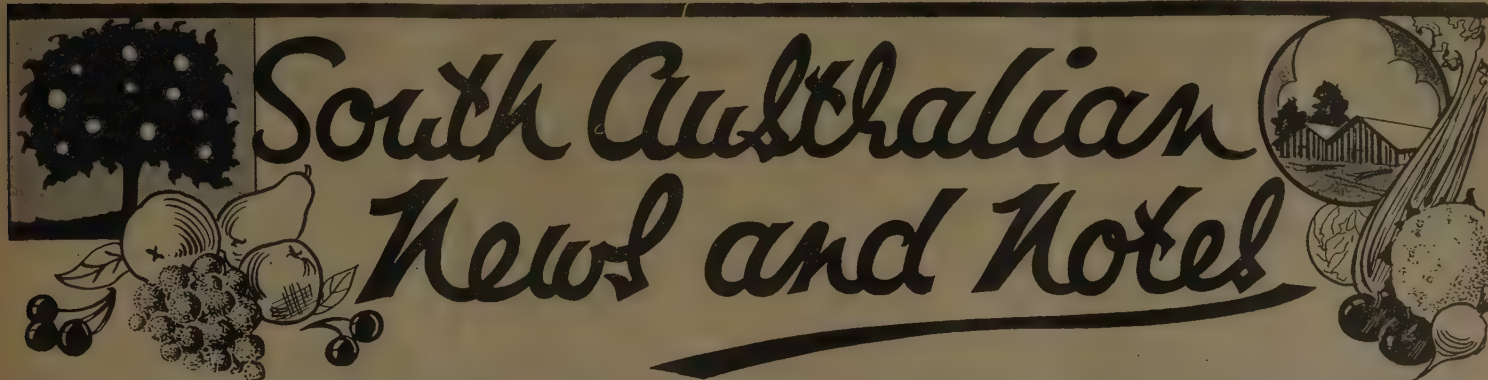
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INCLUDING OFFICIAL NOTES AND REPORTS FROM THE SOUTH AUSTRALIAN FRUITGROWERS' & MARKET GARDENERS' ASSOCIATION.

## The South Australian Fruitgrowers' & Market Gardeners' Association Incorp.

### EXECUTIVE MEETING

THE June meeting of the Executive Committee of the above Association was held in the Board Room, 288A Rundle-street, Adelaide, on June 30, 1939.

The President (Mr. W. J. Bishop) presided over the meeting, which was attended by Messrs. C. J. Pitt, G. H. Schultz, W. H. Ind, N. T. Hobbs, A. O. Petersen, C. H. Ragless, H. H. Schultz, J. Turner, R. A. Cramond, R. Hannaford, G. Clifton, A. D. Chapman, C. Ridley, H. W. Parsons, G. T. Pitt, F. Hughes, J. B. Randell, M. J. Vickers, H. N. Wicks.

Apologies were received from Messrs. L. J. Wicks, M. Packer and C. Stanford.

Minutes, a copy of which had been forwarded to each member were taken as read and confirmed.

On the motion of Messrs. C. H. Ragless and R. Hannaford, the meeting stood in silence for one minute in memory of the late Messrs. H. Wicks and J. C. Grasby, who had passed away during the past week.

#### Correspondence:

(1) A letter from the Wholesale Fruit Merchants' Association of S.A., extending an invitation to the Secretary to attend a meeting called for the purpose of protesting against the Apple and Pear Tax, on June 16 last.

The Secretary reported that he had attended the meeting on that date, but to give growers an opportunity of discussing the provisions of the Act, the meeting was adjourned until July 7.

(2) A statement from the Dept. Agriculture, showing quantities of fruit held in cold store in S.A. on May 31, 1939.

(3) English, Scottish and Australian Bank Ltd., relating to export figures.

"Resolved that the same procedure of former years be adopted."

(4) Letters from Messrs. K. C. Wilson, Hon. G. McLeay, N. J. O. Makin, P. A. McBride and O. Uppill with reference to National Insurance. Received.

#### SECTIONAL REPORTS.

##### Potato Section.

Mr. C. J. Pitt, S.A. Representative on the Federal Advisory Committee reported that he was in receipt of a circular from the secretary to the committee in which it was stated that the Executive of Committee is inclined to support a plan of limitation. Mr. Pitt outlined the proposals on which this plan would be based, namely the creating of a marketing board, and considered it most detrimental to the industry in South Australia. As a meeting of the Committee is to be held in Melbourne on July 17, he deemed it essential that South Australian growers should be represented.

Mr. Pitt moved: "That this Association of growers views with grave

concern any attempt by the Federal Government to interfere with the Potato industry through the medium of a Marketing Board." Seconded by Mr. J. B. Randell. Carried.

Mr. R. Cramond moved: "That the Association use the urgent Potato business now under discussion for a better organizing of Potato growers, and if the response sufficient, the Association consider contributing towards the delegate's expenses." Seconded by Mr. H. N. Wicks.

Amendment: Mr. N. T. Hobbs moved: "That efforts be made by the Association through the Lobethal and Balhannah branches of the Agricultural Bureau to organise Potato growers, and the Association contribute up to £10 towards Mr. Pitt's expenses." Seconded by Mr. G. Schultz.

The motion was defeated and the amendment duly carried.

Apple Section: Mr. M. J. Vickers, Chairman of the Apple and Pear Section reported that a large meeting of Apple and Pear growers had been held on June 28, when a unanimous vote had been carried against the introduction of the Apple and Pear Tax. Price fixing on the local markets was being continued with, and a further rise in prices would become operative on July 3, 1939.

Celery Section: Mr. C. Ridley reported on the activities of the Celery Section, and stated that the season was now showing an improvement.

Citrus Section: A report that a combined meeting of Salisbury and Torrens Valley Citrus growers had been held early in the month. Owing to the lightness of the crop, Torrens Valley was not interested in export this season.

Marion Branch: Mr. H. W. Parsons stated that his branch was concerned with the "Fertilizers Act" under which gypsum was interpreted as agricultural lime. The Act also stated "that every dealer who sells fertilizers shall in the manner prescribed, legibly and durably, brand, stamp or mark upon, or cause to be branded, stamped or marked upon every package containing any such fertilizer."

The above points detrimentally affect the agricultural lime and gypsum to the primary producer, as he will be forced to deal direct with the major fertilizer companies, and unless the Act is amended will be penalized to the extent of £2 per ton, simply by being forced to buy gypsum in bags.

Mr. Parsons moved: "That steps should be taken by the Association, either by protest or deputation to have the Act amended to exclude gypsum as an agricultural lime." Seconded by Mr. F. Hughes. Carried.

Mr. N. T. Hobbs moved: "That a deputation of interested people be arranged to wait on the Minister of Agriculture." Seconded by Mr. A. O. Petersen. Carried.

### Tax on Apples and Pears

Need for Publicity Recognized. But Growers Oppose the Sales Tax Method.

A MEETING of Apple and Pear growers in South Australia, called by the S.A. Fruitgrowers' and Market Gardeners' Association Incorp., was held on June 28, 1939, when the new Federal Tax, which will come into force on a date to be fixed by proclamation, was unanimously opposed.

It was generally agreed that the tax, which will apply to all Apples and Pears sold locally, was economically unsound and would serve only to harass growers and merchants.

Mr. W. J. Bishop, President of the S.A. Fruitgrowers' and Market Gardeners' Association Incorp. presided over the meeting, which was deemed a public meeting.

The president of the South Australian Fruit Marketing Association (Mr. J. B. Randell), who traced the history of the tax, said that about four years ago the Apple and Pear Council asked the Federal Government for a grant for publicity purposes, as only a portion of the Australian Apple and Pear crop could be exported. That meant that large quantities of fruit had to compete on the local market. After voting grants in 1935 and 1936, the Federal Government refused further assistance in 1937 until the industry was better organised. Last year, said Mr. Randell, the Federal authorities were requested to pass legislation to raise funds for the organisation of the Apple and Pear industry. The result was the new sales tax.

"The most disturbing feature of the tax is that it was drafted and presented to the Federal Government without reference to any organised body of growers in the Commonwealth," he continued. "There was therefore no opportunity for discussing the provisions of the Bill before it was passed by Parliament. It was ostensibly passed for the organisation of the industry, but I have been unable to find any clause which definitely stipulates that the money raised will be used solely for the furtherance of the interests of growers. There is nothing to prevent the money raised being diverted into general revenue."

Mr. M. J. Vickers, chairman of the Apple and Pear section of the South Australian Fruit Growers and Market Gardeners' Association, said that the Bill had been favorably received in the other States. They considered the measure a fair one, especially as the industry was badly in need of publicity funds. The general belief in the eastern States, he said was that no expense would be incurred by the industry in the collection of the tax.

Mr. F. Redden, a member of the executive of the S.A. Fruit Marketing Association, stated that every grower selling fruit locally would be liable to a sales tax of 1d. a case, and

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returns would have to be furnished to the Taxation Department every three months. The net return from the tax in South Australia would be little more than £1,100. The payment of the tax would not be as burdensome as the compilation of records every three months.

#### Orchard Tax Needed.

Opposing the tax, Mr. H. N. Wicks, an executive member of the S.A. Fruit Marketing Association, said that policing the Act in South Australia would be impossible. The enormous amount of unnecessary labour entailed in keeping records, especially during the shipping season, would be opposed by all growers and merchants. packing sheds would be in an unenviable position.

"Exporters for years have been forced to pay a levy on all fruit shipped overseas," said Mr. Wicks. "The fruit shipped in late years has been sold at a fairly low figure, and yet the levy has been in force during that period. Again, all fruit shipped helps to improve the local market. The need for organisation is therefore apparent, as those selling locally pay no levy, and yet benefit from the removal of fruit from the Adelaide market. The only way to raise funds for boosting the industry is by an orchard tax on an acreage basis."

Mr. Vickers emphasised the urgent need of a fund for propaganda. He said that the United Kingdom market was insecure and that it was only a matter of time before quota restrictions were placed on Australian fruit. The appointment of Sir Reginald Dorman-Smith as Minister for Agriculture in England, was also a disturbing move for Dominions growers, as he was doing everything possible to improve the position of English grow-

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ers at the expense of imported produce.

"It is not generally known that the average size of Apple and Pear orchards in England is between 200 and 300 acres," he continued. "Our position as exporters is likely to deteriorate, too, as gas storage is further developed. Commodity fruit councils have already been set up in England to regulate imports. Thus, although the present tax is unsatisfactory, funds are urgently needed for publicity in Australia. This would be all the more apparent in wartime, as no fruit would leave these shores for at least four months, and all ports on the east coast of England would be closed. We should have the money and machinery to deal with this position if it ever arises."

A motion moved by Mr. Redden that "This meeting resolves to take the necessary steps to induce the Federal Government to repeal the new tax, as it will harass growers and merchants and is economically unsound," was passed unanimously.

Messrs. F. Redden and H. N. Wicks were appointed to work in conjunction with the Wholesale Merchants' Association and to wait on the Premier (Mr. Playford) in the near future.

Messrs. Wicks, M. J. Vickers, and Redden were elected delegates to attend the meeting being called by the Wholesale Fruit Merchants' Association on July 7 to discuss the new tax. —"Advertiser."

### UNFORTUNATE ACCIDENT TO MARKET GARDENER.

Mr. A. G. Day, of Uraidla, suffered a most unfortunate accident on June 19 last, when his left arm was severed above the elbow. Mr. Day was feeding a chaffcutter when his coat sleeve caught in the machine, resulting in such shocking injuries to the arm as necessitated amputation. Mr. Day was taken to the Uraidla District Hospital and is now making splendid recovery.

## The South Australian Fruit Marketing Association Inc.

### EXECUTIVE COMMITTEE

**M**INUTES of monthly meeting of members held at the Secretary's office, Brookman Buildings, Grenfell-street, Adelaide, on June 30, 1939.

**Present:** Messrs. M. G. Basey, F. F. Redden, D. Norsworthy, R. G. Hannaford, P. R. B. Searcy, J. H. Dunning, C. A. Stewien, H. N. Wicks, R. A. Cramond, M. J. Vickers, W. W. Miller, A. R. Willmore, H. M. Charllick, R. O. Knappstein, J. B. Randell, A. O. Petersen, R. H. A. Lewis, L. J. Bishop, F. B. James, and the Secretary.

**Apologies:** Messrs. E. Leishman, W. F. E. Smith, S. M. James, G. A. W. Pope, G. Quinn, Hon. T. Playford, M.P.

The President, Mr. J. B. Randell, occupied the chair.

**Membership:** Applications for membership were received from: Messrs. E. F. Lindstrom, A. N. Marshall, James Conlon, and F. A. Brockhoff. It was resolved that the applications be approved and the names entered on the Register of Members.

**Correspondence:** Letter from the Dept. of Commerce dated June 7, forwarding schedule of classes and prices, together with entrance forms for the Imperial Fruit Show to be held in London from November 13 to 18, 1939.

Letters from the Australian Apple and Pear Council dated:

May 24 and June 2, re trade with Colombo, and enclosing copies of correspondence in reference to the recent condemnation of Apples sent to Colombo on the ground that they were infested by "caterpillar borer." The Commonwealth Fruit Officer, Mr. Carne, was making investigations, and it was agreed to ask the Dept. of Commerce for a full report on the matter.

May 31, enclosing Australian Trade Commissioner's notes on Canada, China and Hong Kong, Japan and Egypt, and notes on Palestine, New Zealand and United States.

June 8, enclosing copy of progress report of the Council's activities from the date of the last conference up to May 15.

June 22, acknowledging receipt of photos of the Adelaide Markets which had been submitted to the Visual Education Officer for consideration in connection with the preparation of the educational film.

**Continuation of Apple and Pear Council:** A letter dated June 21, was received from the Secretary of the Apple and Pear Council, referring to previous correspondence and asking:

1. Whether in the opinion of this Association the Council should continue, and
2. What items should be dealt with by the Council as complementary to or apart from the Apple and Pear Organisation Board, and suggesting that the items might possibly include:—
  - a. Development of the trade in fruit juices and fruit by-products.
  - b. Programme for combating the present trade in synthetic essences posing as "fruit" juices.
  - c. Australian market development, including co-ordination of publicity, and
  - d. Also programme for the co-ordination of Apple and Pear supplies to the main Australian markets.

The President pointed out that a resolution had already been passed by the Association approving of the continuance of the Apple and Pear Council, and therefore any further motion was unnecessary in this regard.

A motion to rescind the previous minute was moved, but lapsed for want of a seconder.

A draft reply was read by the Secretary, setting out that in the opinion of this Association it was very desirable that the Council should continue and approving of the suggested items to be dealt with by the Council. Also pointing out that the suggested budget would not permit of the attendance of 22 delegates to the Council as in the past and suggesting that the delegates should be 14, but the voting strength to be the same as provided for under the present constitution.

The draft letter was approved and the Secretary was instructed to forward same.

It was pointed out that the suggested budget would mean that the affiliation fees would increase from £10 per vote to £30 per vote.

**Apple Publicity:** The proposed collection by a Sales Tax of 2d. per case on local sales to provide a fund for publicity throughout Australia was discussed at considerable length.

Mr. P. R. B. Searcy pointed out that under the provisions of Act No. 61,

it was specifically set out that the full amount collected would be handed to the Apple and Pear Board for publicity purposes, without any deduction for expenses, and that under that Act, the amount could not possibly be appropriated to general revenue.

A resolution was carried that this Association is in favor of advertising.

Messrs. J. B. Randell, R. A. Cramond, M. J. Vickers, L. J. Bishop, P. R. B. Searcy, W. W. Miller and A. R. Willmore contributed to the discussion which followed in which it was pointed out that there did not appear to be very much objection to the proposed tax in other States.

Members agreed on the desirability of publicity, and it was also agreed that the merchants would be involved in a large amount of additional work in connection with the collection of the tax, and this would also apply to some extent as far as growers were concerned.

Members having ventilated their opinions fully, no definite resolution was passed.

**Apple and Pear Board:** At the request of Mr. F. F. Redden, the Secretary was instructed to write the Chairman of the Apple and Pear Board and ask if the Association could be furnished with reports of the Board's meetings.

**Research Sub-Committee:** At the meeting of the Research Sub-Committee, Mr. R. O. Knappstein read a paper on "Sprays," and an interesting discussion followed.

Mr. R. G. Hannaford would be in charge of the July meeting and initiate a discussion.

### FRUIT WORKERS SEEK HIGHER WAGES.

#### A.W.U. Attacks Conditions.

In support of its claim before the Arbitration Court for a new award in the fruit industry, the Australian Workers Union has named nearly 5,000 respondents. The Union named certain instances where conditions for casual employees were unsatisfactory.

The Union has proposed that the value of accommodation and any food allowances provided by the employer should be determined by a written agreement between each employer and his employees, or by a board of reference.

Demands affecting wages in the Union's log were:—

An increase in the basic wage from £3/18/- to £5 a week.

A loading of 4/- a week for seasonal workers.

A loading of 10/- a week for workers in certain areas, including Mildura, Renmark and Murrumbidgee Irrigation Area.

A claim by the Union for a 40-hour week will be heard later by the Full Court.

The case for the rebuttal of the Union's claim has been submitted to the Court.

Judge O'Mara is personally inspecting some of the areas involved in the dispute.

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## SOUTH AUSTRALIA—(Continued)

## Mid-Murray Notes

FAILURE OF NEW COVER CROP, FENUGREEK, TO LIVE UP TO ITS REPUTATION — APPARENT SUCCESS OF WHITE MUSTARD — ADDRESS BY MR. C. WIEDENHOFFER (TECHNICAL MANAGER OF RENMARK GROWERS' DISTILLERY) — THE BUILDING UP OF POTASH RESERVES — THE BALANCING OF MANURES — ACTION OF NITROGEN, PHOSPHORIC ACID AND POTASH ON SOILS — C.S.I.R. TO BE ASKED TO MAKE FURTHER INVESTIGATIONS INTO USE OF POTASH — THE PRUNING OF SULTANA CANES — SUCCESSFUL CONVERSION OF CARS INTO TRACTORS.

(By Our Correspondent.)

IT IS SELDOM that on this date we still have vine leaves hanging. Up to the present time the Winter has been extremely mild, with hardly a frost to record, and this accounts for the unusual sight of leaves still being on vines on the shortest day of the year.

Because of the mild weather and occasional showers of rain, cover crops have made good headway, and Roses are blooming in great profusion.

## Cover Crops.

Some months ago I mentioned in these notes that a new cover crop, Fenugreek, was being extensively tried out this year in Renmark, because of the good accounts given it in U.S.A. papers. On the present showing Fenugreek has not stood up to its reputation, and I do not consider it any better than many of our native Clovers, and quite inferior to King Island Melilotus. However,

plantings made late in the season will indicate whether this particular legume is better adapted to Winter growth. Fenugreek will not germinate satisfactorily on soil containing a fair amount of salts. In this respect Beans and Melilotus are far more satisfactory.

Many growers have tried different varieties of cover crops this year, chiefly as a matter of economy. Tick Beans have been up to 13/- per bushel during planting time, and at this price cover cropping with this seed comes rather expensive.

I cannot understand why some of the irrigation areas in the Upper Murray and Murrumbidgee do not go in for planting this crop with the purpose of supplying the other irrigating areas with seed. There is no doubt that Tick Beans have proved the most popular and satisfactory type of leguminous cover crop yet tried in these areas, as it seems to thrive on almost every type of soil, and for this reason it is imperative to obtain seed at a reasonable cost.

While looking over the cover crops planted among the deciduous trees on the High School block recently, I was struck by the vigorous growth made by White Mustard. This plant belongs to the Turnip family, and makes a good bulk of organic matter, and grows rapidly, far outstripping Beans, Peas, and Barley, with which it was sown. There are many blocks which have only grown indifferent leguminous cover crops, but may have more success with White Mustard.

In the event of White Mustard or any non-legume being grown as a cover crop, then the nitrogen requirements of the plant must be supplied out of a bag.

An interesting experiment was tried by a Barmera grower to get a cover crop established in a rather salty patch of soil. The land was given a heavy dressing of gypsum and planted with King Island Melilotus. The first year there was not a very successful response, but the plants were allowed to go to seed. The following year a dense mass of growth ensued, and this grower

states that he has no difficulty in getting a natural growth every year.

## Potash Reserve.

On Monday, June 19, Mr. C. Wiedenhofer (Technical Manager at the Renmark Growers Distillery) gave an address before the Barmera Branch of the Agricultural Bureau on "Vine Health and Productivity." Mr. Wiedenhofer, who took a post graduate course at Montpellier, in France, and also visited vineyards in Algeria and Germany, has taken a keen interest in our vine production, more especially with regard to the wine-making quality of the Grapes we produce. Quite recently Mr. Wiedenhofer made a translation from a French publication dealing with the quantities of potash applied in that country to keep the vines in good production, and he is of the opinion that we have neglected building up our potash reserves in the soil in this country in comparison with the general practice adopted in France.

## Balancing Manures.

In the address given at Barmera, Mr. Wiedenhofer's most important point was made by a strong request for growers to balance their manures, and replace those which are known to be used up in the process of growth and fruit production. Of the various soil constituents the speaker made the following remarks:—

Carbon is the most widely used, but is again the most abundantly available by nature, and will not concern us. Nitrogen is most essential, but occurs freely in well worked soils, and is easily added in a very available form.

Phosphates are very essential, and unfortunately, because they are lacking in Australian soils, must be added.

Potash is again an essential, and although freely occurring in our River soils, may not be altogether in an available form.

Iron occurs in almost all soils, but in variable quantities, sometimes being low, or in an inaccessible form, so that the natural resources must be supplemented.

Calcium has a physiological role inasmuch that it is essential to soils in order that they be in a condition to assist the cultivation and the absorption of other foods and to assist bacterial growth within the soil.

Sulphur is found in all plant life.

We are agreed that these minerals are predominant in the composition of the vine and its fruit, and that they are one and all vitally essential to growth. Each year, therefore, when we take off the fruit and prune our vines we realise what a vast quantity of material is taken away. Nature provided in her original scheme that the vine in its wild state drop its leaves and fruit on the ground around it, and thus return to the soil that which is drawn from it. Where man takes this away, he must be quick to make amends, for it is a programme that brooks no interference if the vine is to retain its normal functions. A wild vine is not a heavy bearer under ordinary circumstances, but by intense cultivation we have increased its productivity and can assist nature by

supplying those ingredients which go to make fruit and growth in excess of its bare necessities, so that the plant will not have to expend its energies in searching, but will always have its foodstuffs in excess of what it requires. It is most unreasonable to presume that a soil is always going to have a sufficient store of these materials, and it is only reasonable to presume that we must add them in sufficient quantities.

In elaborating more fully on the three main plant foods, nitrogen, phosphoric acid and potash, Mr. Wiedenhofer said that nitrogen promotes healthy green growth. In excess, it will produce spongy growth, and become subject to disease, besides bringing about a late autumning of the leaves, and general absence of true Autumn colors, while a bad maturation of leaves will be noticeable. Nitrogen is formed naturally from rotting vegetation, gathered from the air by nitrogenous plants, and a small quantity gathered from rains at the time of thunderstorms. It is doubtful, however, whether the latter is significant.

It is also obtained from urea in urine, such as is absorbed in straw and stable manure, and from such chemicals as sulphate of ammonia. A deficiency will bring about poor, sick-looking growth which the observant grower will quickly identify. By adding sulphate of ammonia a response should be obtained in from 10 to 14 days after treatment. It acts the quickest of all plant foods, and as it gives apparent results in such a short time, is probably the most dangerous of manures as regards future crops.

The phosphates in phosphoric acid tend to temper some of the faults of nitrogen by modifying the size and consistency of the cane, and giving a harder cane and fruit. The occurrence of phosphoric acid is almost nil in Australian soils, and must be added as superphosphate. Potash is mainly combined with clays, to which it adheres very tenaciously.

Renmark soils are classed as being rich in potash, but this would not apply to the lighter, sandier soils of Berri. The vine probably has more need of potash than any other plant food, for big quantities are found in the cane and the fruits as salts of potash (e.g., potassium bitartrate, or cream of tartar, recovered in the wineries). Potash probably plays a bigger part in the development of sugar than any other constituent, by reason of its favoring the development of the leaf and its photosynthesis. It is also known to have the power of regulating the action of nitrogen to some degree.

Potash is probably one of the elements which is being studied more closely at the present moment than any other element in the viticultural world, and its importance is being recognised more than ever.

In a translation from the French of work done by Lagatu and Maume, two eminent French research workers, Mr. Wiedenhofer said that in France up to 10 cwt. per acre of potash was necessary over a period of three years before the vine obtained full benefit from applications made and that where applications of 1 and 2 cwt. per acre were made no apparent results were obtained. These two French research workers advocated the policy of building up reserves of potash to ensure a working capital.

In summarising his remarks, the speaker thought that it was a mistake for any grower to try and produce fruit with only a nitrogenous manure, and urged them, when applying artificial manures, to be sure to get a proper balance, having special regard to potash.

Mr. Eric Sims, who occupied the chair, called for questions, after the

address, which kept Mr. Wiedenhofer busy for a considerable time.

One speaker thought that as our manurial tests had shown little or no response to potash there might be some factor regarding climatic conditions which militated against the same need for large quantities of potash to be applied to our Australian soils as in French soils. However, after some discussion a resolution was passed asking the C.S.I.R. to institute a further range of manurial field plots with special regard to larger quantities of potash than those which have been previously used in manurial tests.

In combination with other manures, up to 4 cwt. of potash per acre is used in the present C.S.I.R. trials, and the assembly thought that in the light of French experiments, where 10 cwt. per acre is used annually in some instances, a larger quantity of potash in our trials on various soils would definitely establish the benefit or otherwise of heavier dressings of this manure.

Mr. Van Velson said that he had obtained definite results with citrus fruits by the addition of potassic manures, in fact, he said, "I could not grow a satisfactory Orange without the aid of potash."

Now that

## Pruning

is in progress, an examination of the vines shows that in many cases there is a fair amount of "die back" on canes within a pruning radius of the crown of the vine. Where this is general it will be necessary to go out a little further to get good fruiting wood.

Away back in the Summer time, when severely high temperatures were experienced, many of the Sultana canes had the outer bark cracked and scored, just as though scraped with a rasp, and growers wondered whether next year's fruiting buds would be affected as a consequence.

The situation was watched by Mr. A. V. Lyon, of the C.S.I.R. Research Station at Merbein, and as soon as the leaves had fallen, over 100 canes were sent to Dr. Barnard at Canberra for examination. After a careful microscopical survey it was found that the buds were very satisfactorily developed, and from this we may expect a high fertility in our Sultanas for next year's crop. The canes showed that from the 5th to the 18th buds, 70 to 80 per cent. of the buds were fertile.

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In recent years there has been a tendency for growers to leave a bigger percentage of Sultana canes than formerly, owing to the apparently bigger crop produced. There is, however, another side to the picture, and that is the quantity of dried fruit produced from vines with varying number of canes. It has now been demonstrated that although a larger quantity of canes will give an increased number of bunches, the drying ratio of this fruit is higher than where lesser canes are laid down. It doesn't pay to leave too many canes as this leads to more handling costs to get a given quantity of dried fruit, and causes also a slower drying time. When surveying a vine at pruning time it pays to leave one or two canes less than we believe it capable of carrying; by doing so we get a higher Baumé in the fruit and consequently a lower drying ratio.

#### Car-Tractors.

In last month's notes, mention was made of cars being converted to tractor use and having been successfully used in the Berri-Barmera area. I went to see Mr. Jack Fewster's conversions a week or two ago, and found that he had two doing good work. One was a Hudson and the other a Studebaker, both of which had been shortened about 2 ft. The two pieces of chassis cut off were ingeniously employed so as to form a basis for a mechanical hoist for lifting implements in and out of the ground.

The back axle and differential gears were taken out of the cars and a Ford back axle with a worm drive installed so as to increase the ratio to seven to one. This part of the equipment is very necessary, as it was found that without an increased ratio the ordinary low gear on a standard

car makes heavy going, and the gears very soon "cut out." Mr. Fewster has made provision for working slippery soils by shaping some inch by inch T iron and fastening several of these around the tyres by means of bolts and a piece of plough chain.

All kinds of jobs have been done with this type of car tractor, and an invention of Mr. Fewsters for raking out, or rather pushing out the vine cutting, makes an easy job of what is usually considered one of the worst on the block. During harvesting, a trailer is attached, and all the fruit carted from the block in to the dip, and even after the fruit has been dried, it is conveyed to the packing houses in a specially constructed trailer. More than two tons of dried fruit have been hauled in this way.

As the conversion of a car to a tractor has been in vogue for several years, there has been a gradual evolution, brought about by each owner continually incorporating fresh ideas, and passing them on cheerfully to his neighbours.

No publicity is given to these stout fellows who form a little society of their own and who are successfully grappling with the economics of fruit growing by dispensing with horses altogether and employing a mechanical unit which perhaps costs them in the region of £50 as compared with an outlay of several hundred on a modern tractor. Perhaps the comparison may have many sides to argue from, but the main thing is that these car tractors are doing the work they are asked to do, and have proved themselves very satisfactory on the light types of soil found in the Barmera and Berri areas.

#### Regarding the position of

##### Tick Bean Seed

for next year's operations, on making enquiries in trade circles I find that the prospect of a rise in price is being predicted. This is to be regretted, as the possibility of next season's crop of seed can not yet be ascertained nor predicted, and from this, the only conclusions to be arrived at is that some price manipulation is being arranged.

The main source of supply is Tasmania, and I would ask our friends in this State to seriously consider the position from every angle. There is a growing demand for Tick Beans each year, and should there be a suggestion of price juggling a natural reaction is bound to come. Growers in the irrigation areas are already seeking an alternative cover crop plant, and the price of 18/- per bushel for Beans is beyond all reason in comparison with other plants which hold out good possibility. If the price goes beyond this figure, as has been predicted, then those who are responsible may cause the death of the goose that lays the golden egg. —"Nemo."

#### N.Z. TAKES AUSTRALIAN LEMONS.

For the first time since December, 1932, large quantities of Lemons have been sent to New Zealand, states Mr. A. W. Schwennesen, General Manager of the V.C.C.A. It is expected that further supplies will be shipped.

The Internal Marketing Department in N.Z. has taken over the marketing of Lemons in the Dominion, and is guaranteeing a price to growers. It is therefore assumed that N.Z. growers are not raising any objection to imports from this country. It is also understood that the N.Z. crops of Lemons is short of requirements.

Further irrigation works are in progress in the Chaffey area, near Renmark, South Australia.

#### PUBLICATIONS RECEIVED.

We are in receipt of the 1938 Annual Report of the Cawthron Institute, Nelson, N.Z. The report contains information as to investigations into fruit and tobacco research, Tomato investigations, biological control of noxious weeds, and various other matters in which the Institute is concerned.

The Fifty-Seventh Annual Report for the fiscal year ended June 30, 1938, from the New York State Agricultural Experiment Station, Geneva, N.Y., U.S.A., is to hand. The report contains accounts of investigations carried out in their various branches of research work and is a valued document. This station has done good in investigating improved methods of fruit juice extraction and fruit by-products; also in the study of rootstocks.

The 48th Annual Report of the Washington State Agricultural Experiment Station, Pullman, Wash., U.S.A., contains much interesting information relative to their year's work, including reports from the Divisions of Agricultural Engineering, Agronomy, Animal Husbandry, Chemistry, Entomology, and Plant Pathology, Agricultural and Home Economics, Soil and Water Conservation, etc. Particulars are given of the researches into spraying compounds to control the Codling Moth.

A valuable addition to the textbooks issued by the N.S.W. Department of Agriculture is the recently published "Honey and Pollen Flora of New South Wales," by W. A. Goodacre.

Not only does this well printed and excellently illustrated book enable apiarists to identify the trees that are useful to them and give information as to the quality of the honey and pollen produced, but it discussed also such phases of the flora as indications of approaching budding, flowering periods, etc.

Price 5/- (6d. postage) from the Department and leading booksellers.

#### SOIL EROSION,

##### Prevention of De-forestation in South Australia.

The S.A. Government is convinced of the necessity for an active campaign against wind and water erosion, therefore the Cabinet has decided to recommend to the Executive Council an alteration in the terms of future perpetual leases. Lessees will be compelled to preserve the natural timber on such sections of their property as are specified by the Commissioner of Crown Lands. Further important measures will be introduced when Parliament assembles.

#### GIFT SCHEME ARRANGED BY THE MURRAY CITRUS GROWERS' CO-OPERATIVE ASSOCIATION.

Orders were received by the Federal Citrus Council, Temple Court, Melbourne, up to June 20, for gift boxes of Oranges to be sent to any address in the United Kingdom (Great Britain and Northern Ireland) at a cost of 23/-, including the cost of the fruit.

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# THE MARKET GROWER

OFFICIAL ORGAN OF VEGETABLE GROWERS' SOCIETY OF VICTORIA. THE KOONDROOK & BARHAM TOMATO GROWERS ASSOCIATION AND THE SOUTH AUSTRALIAN FRUITGROWERS' AND MARKET GARDENERS' ASSOCIATION.

## Market Gardening Notes

"GET-UP" OF PRODUCE — BRANDS PROVE PROFITABLE — SELLING BY BRAND — ATTENTION TO DRAINAGE — CULTURAL HINTS ON ONIONS, CARROTS, PARSNIPS, AND LETTUCE.

(By Our Correspondent.)

IN moving around the Queen Victoria Market, Melbourne, one is struck by the amount of profit lost by vegetable growers through the slipshod methods they employ in putting up their goods for sale. You will often see a very good sample of produce badly washed, loosely tied and looking anything but attractive, or Cabbages and Cauliflowers with the outer leaves badly broken away—often due to rough handling or overloading. With just a little extra care the same produce would have been first quality.

It is possible that with the advent of motor trucks with greater carrying capacity, that we are carting far too much in one load. Compared with a horse-drawn lorry, many trucks will hold twice as much and not be overloaded, and we find that owing to the deeper packing necessary, goods are often crushed which should come out nice and fresh. Almost every grower realises at times that his load would have been much more profitable had he left a third of his produce at home.

I think the time has come when growers, for their own financial benefit, should give serious thought to the idea of making the best show of whatever they have to sell instead of jumbling it all in and trusting to luck.

### Buying by Brand.

In New Zealand we find Cabbages and Cauliflowers, and many of the root crops, sold in bags. The buyers very seldom open the bag to inspect the produce, as they can rely on the brands, and buy on the brand.

Of course there is not anything like the quantity of produce to be sold that there is in Victoria, but it certainly gives us much food for thought. There are many growers here whose reputation is quite good enough to buy on their brand. It would certainly take longer to prepare, but our trouble in Victoria in normal times is not that we can't produce the goods, but that we produce too much to sell profitably.

It would appear that under a wages award, hours of labor would be shorter, and if State wide in effect, must eventually have a beneficial effect on the sale of vegetables.

### Drainage.

How Nature at some time or other always makes up for what has been withheld, has been brought very forcibly under the notice of growers by

the great amount of rain which has fallen during the last three months.

It will probably be remembered that during our drought in January and February, growers were advised generally, to see that their headlands were well scooped out, and their drains cleared. Growers who did this will no doubt be very amply repaid, for nothing will ruin a crop quicker than to have water lying in it.

Any signs of a blocked drain should be closely watched for, and if any spot which is agriculturally drained, remains unduly wet, you may be practically certain there is a blockage in the pipe. The most effective way of clearing the block is to open the drain at the lower side of the wet place and work the pipe back until the block is reached.

Not always a broken pipe is the cause of a blockage. Quite recently I had the experience of roots finding their way into the pipes during the dry weather, and dying when the crop was removed. With the first good flow of water all these dead roots were taken to a point many yards down the pipe line and eventually formed a block, which had to be removed.

The reason for the roots finding their way to the pipe during the dry weather was because of the amount of irrigation which was being done; there was always a trickle of water coming through.

### Cultural Notes.

Onions which have been planted earlier in the season should be kept well worked between the rows. This is most essential at this period of their growth, for it is the extra little bit of growth that is put into them during the cold months which makes for a better crop in the early part of the season. It is not advisable to work among this crop while there is dew or rain on the leaves.

A good deal of fresh planting can be done during this month, and crops sown in July are among the safest, as they will not go to seed before the new year.

Carrots, Parsnips, Lettuce, if sown now give good results. The land should have been worked up to a fine tilth, and should not be of such a nature that it will flood easily, or set down hard in the early Spring.

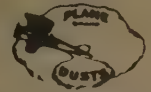
Sow Carrots and Parsnips in rows ten to twelve inches apart, and not more than five rows to each land.

## TOMATO CULTURE

### HINTS REGARDING VARIETIES.

THE SUBJECT of Tomato culture has been capably dealt with in a series of articles by Mr. Basil P. Krone, in the "Victorian Journal of Agriculture." Included are details relative to suitable soils, hot bed and cold frame, planting out, irrigation, manuring, pruning, varieties, etc.

With regard to varieties, Mr. Krone states that the Chinese, or flat corrugated types of Tomato usually form the main crop in Victoria; they produce fruit of good marketable size



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That some varieties of Tomatoes respond to pruning and staking more than others is evidenced by this plot of Tomatoes at Portland, Victoria. Some of the lower foliage has been removed to hasten the ripening process of the enormous crop.

without pruning or staking, but, unfortunately, the quality is inferior to the canning types.

The following varieties are recommended: Bendigo Large Red, Burwood Wonder, South Australian Dwarf, Orange Prolific, Portland Mortgage Lifter, Mac's Special (Portland variety), and Pale Leaf (syn. with Yellowtop). Careful observation has shown that the first three mentioned will give greater satisfaction than the others, if the following recommendations are noted:—

Bendigo Large Red is satisfactory throughout the State. Burwood Wonder and South Australian Dwarf, which are of the same type, are especially suited to the Goulburn

Valley and Northern Irrigation Districts, although they are satisfactory in many other places. They can also be used as an early variety. Orange Prolific is most suitable for Southern Victoria, and is essentially a late variety. Both S. Australian Dwarf and Orange Prolific are particularly suited to glasshouse culture.

Further information will be included in subsequent issues regarding large smooth round varieties for canning; varieties recommended in the dessert or small cluster type; dessert or cluster types tested in 1937-38; germination and ripening periods; and reports of tests of some special canning varieties received from U.S.A.

The seed should be planted one inch deep, for the shallower seed is planted at this time of the year, the better.

The best varieties to plant are Intermediate Stump Rooted Carrots and Short Hollow Crown Parsnip.

The old idea of trenching Parsnip land deep is no longer necessary for the present-day requirements demand a short thick Parsnip.

Lettuce should also be planted in rows ten to twelve inches apart and not more than five rows to the land. In this case seed should be only covered with a sprinkle of soil, care be-

ing taken to watch that the birds do not take this seed as it is just coming through the ground. It is often necessary to cover this crop with wire netting or to place poles with paper dangling at close intervals up the beds.

Winter Neapolitan or Webbs Wonderful are the best varieties, and are splendid eating types.

Potatoes can now be planted freely for the early Spring crop. No. 1 Carmen is the best sort to plant, but Up to Dates may also be planted now.

### VICTORIAN POTATO CROP.

#### Season's Prospects.

It is estimated that there are 34,000 acres of Potatoes in Victoria this season, as compared with 41,105 acres planted in 1937-38.

The yields obtained indicate an average yield of 2½ tons to the acre. On this basis of 34,000 acres, this would give an aggregate yield of 76,250 tons.

Up to the end of April 23,848 tons of Potatoes were passed for inspection, compared with 48,607 tons in the same period last season. Imports for the same period were about 10,000 tons, compared with 1,300 tons last year. About two-thirds of the late crop has yet to be marketed.

### Tying up and pruning Tomatoes at Portland.

(Illustrations by courtesy Victorian "Journal of Agriculture.")





# Export & Commercial News

## Fruit Marketing in Brisbane

NEED FOR SOUTHERN STATES TO SEND VARIETIES IN THEIR PROPER SEASONS.

TOO MANY UNPOPULAR VARIETIES GROWN.

QUEENSLAND MERCHANT URGES EDUCATIONAL PUBLICITY TO INCREASE FRUIT CONSUMPTION — MELBOURNE APPLE WEEK APPRECIATED.

Mr. J. C. Arkell, Secretary of the Brisbane Fruit Merchants' Association, who has just been visiting Tasmania and Victoria, reports that Tasmania has an enormous crop of very good fruit, particularly Democrats. Mr. Arkell is very definitely of the opinion that Victorian fruit is becoming unpopular in the Brisbane market because of the inferior quality and lack of attention to the market requirements by the growers concerned. He considers that unless Victorian growers are prepared to place an article on the Brisbane market that is better than they have been doing, they will lose the market entirely.

Samples of the inferior fruit complained of have been sent to the Victorian Department of Agriculture, and they state that they have not the power to stop this fruit being exported from Victoria to Interstate markets. Mr. Arkell feels that by educational methods the Department should make the growers realise that a bad sample of fruit leads the public

of Queensland to think that that is all Victoria is able to grow. This is certainly not the case. He is fully aware that excellent fruit is grown in Victoria, but something is lacking in the need for attention for the Brisbane market. Doubtless the present difficult season is a contributing factor.

During his visit to Tasmania, Mr. Arkell told growers that by marketing varieties out of season they were losing quite a good market. Large Jonathans are being put on to the market which should have been put there last March. There are also too many unpopular varieties being grown. When the public demands a certain class of Apple, the grower should be prepared to give it to them.

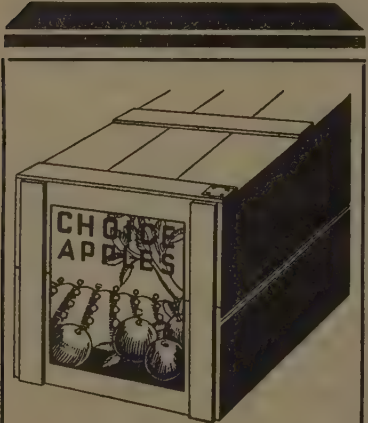
Interested in Publicity.

Mr. Arkell is also Vice-Chairman of the Queensland Apple and Pear Publicity Committee, and has taken a great interest in all their activities. In particular he is one of the team who visits the State Schools distributing Apples, and looks upon this work of educating the children as of first importance. He is also a member of the Queensland Nutrition Council, and is in thorough sympathy with the methods for educational publicity as against what might be termed "orthodox advertising," believing that this educational work must be carried out constantly over a period of years.

Because of his interest in this work, Mr. Arkell was particularly impressed with Melbourne's "Apple Week." He stated that he would like to compliment the Committee responsible for the excellent publicity they are giving Apples and Pears throughout the city. He was particularly pleased with the charming displays of Apples in the city shops, and noted the attention which the press and radio stations gave to the enterprise.

He is thoroughly convinced that the work of publicity is not so much advertising, as of shifting the emphasis on to the medical and dental professions, with which the fruit industry is thus co-operating in order to benefit the health of the people, and particularly the health of the children.

Mr. Arkell is a member of the Executive of the Queensland Bush Children's Health scheme, and considers that it is the national duty of everybody interested in the welfare of the nation to see that children out of touch with the cities get the opportunity to eat more fruit.



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LONDON'S SHIPPING.

During the week ended May 26, 1,071 vessels, representing 1,117,508 net register tons, used the Port of London. Of these 521 vessels (900,626 net register tons) were to and from Empire and foreign ports and 550 vessels (216,882 net register tons) were engaged in coastwise traffic.

## Apple and Pear Exports January-May, 1939

The figures relating to the exports of Apples and Pears from Australia for the five months January to May, 1939, together with comparative figures for the previous year, are given hereunder, by the Department of Commerce.

States.	Apple Exports—January to May.					
	United Kingdom.	Continent.	Elsewhere.	Total, 1939.	Total, 1938.	
	Cases.	Cases.	Cases.	Cases.	Cases.	
N.S.W. . . . .	10,081	179	8,789	19,049	78,492	
Victoria . . . . .	230,811	9,191	10,472	250,474	584,000	
Queensland . . . . .	17,026	—	9,600	26,626	34,749	
South Aust. . . . .	222,630	53,720	5,500	281,856	596,164	
West. Aust. . . . .	786,240	290,406	84,491	1,161,137	491,999	
Tasmania . . . . .	2,320,695	436,243	27,808	2,784,746	2,539,885	
Total, 1939 . . . . .	3,587,483	789,739	146,660	4,523,882	—	
Total, 1938 . . . . .	3,629,461	548,645	146,683	—	4,324,789	

The export of 1,143,744 cases of Apples during May, as against 668,412 cases in May, 1938, resulted in an appreciable increase in total exports for the first five months of the year. Exports aggregated 4,523,882 cases, being 199,093 more than for the same period of 1938. Whilst exports to the United Kingdom show a decline of 41,978 cases, the total forwarded to Continental destinations increased by 241,094 cases.

States.	Pear Exports—January to May.					
	United Kingdom.	Continent.	Elsewhere.	Total, 1939.	Total, 1938.	
	Cases.	Cases.	Cases.	Cases.	Cases.	
N.S.W. . . . .	9,514	—	6,555	16,069	26,039	
Victoria . . . . .	282,943	—	7,058	290,001	350,781	
Queensland . . . . .	—	—	515	515	144	
South. Aust. . . . .	19,141	—	1,236	20,377	45,836	
West. Aust. . . . .	49,453	15,951	1,466	66,870	27,412	
Tasmania . . . . .	267,937	—	115	268,052	128,969	
Total, 1939 . . . . .	628,988	15,951	16,945	661,884	—	
Total, 1938 . . . . .	543,791	17,162	18,228	—	579,181	

The exports of Pears in the month of May, 1939, were also greater than in 1938, the respective figures being 79,664 cases and 54,619 cases. Total exports for the five months show an increase of 82,703 cases in comparison with 1938. Shipments to the United Kingdom were 85,197 cases greater, but slight reductions are revealed in the quantities forwarded to Continental and other destinations.

## Victorian Fruit in U.K.

INTERESTING REPORTS are to hand from the Victorian Commercial Officer in London (Mr. S. R. McColl). The Pears ex "Oronsay" arrived in a satisfactory condition, and realised good prices. The Pears ex "California Star" (chiefly Packhams, Boscs and Howells, were hard and of excellent quality.

Accompanied by Mr. J. M. Ward, Victorian Superintendent of Horticulture, a visit was made to Liverpool to report on the outturn of Victorian Apples shipped on the "Anchises" for Liverpool and Glasgow.

Varieties inspected were: Jonathan, Dunns, R.D.C., Alfriston, Cleopatra and Granny Smith.

There was far too much immature fruit in all varieties in this consignment, and Bitter Pit was prevalent, particularly in R.D.C., Cleos., Granny Smith and Alfristons. Jonathans, too, were generally immature, and although showing only slight Pit in most marks examined, there were many packs which included wilted fruit. The quality of the fruit was generally satisfactory, apart from the shortage of color and immaturity. The packing was also generally satisfactory, although some marks were slack packs, and one line showed faulty grading.

The "Maloja" arrived with 7,222 cases of Apples and 1,784 cases of Pears. The bulk of the consignment of Pears consisted of B. Bosc and Packham varieties, also Howells and B. d'Anjou. With the exception of some marks of B. Bosc and Howells in a forward to full ripe condition, the bulk of the Victorian Pears opened up in a satisfactory condition. Prices were:—Packhams, 10/-, 13/-; B. Bosc, 9/-, 12/-; Josephine, 12/-, 13/-; Howells, 8/6, 9/6; Anjou, 12/-, 13/-; Comice, 9/-, 10/- (tree blemished); W. Cole, 9/-, 9/6 (small and tree blemished).

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## FRUITGROWERS' FEDERATION OF N.S.W.

Establishment of Tinplate Industry Opposed :: Citrus Trade with N.Z. :: Problem of Neglected Orchards :: Alien Immigration Opposed :: Artificial Coloring of Oranges :: Retailers Should Sell According to Variety and Grade.

**A**T THE ANNUAL CONFERENCE of the Fruitgrowers' Federation of N.S.W., held at Sydney at the end of June, there was a large attendance of growers from all parts of the State.

### Tinplate Industry.

After a vigorous discussion it was decided to oppose the proposed establishment of the tinplate industry in Australia, on the grounds that the United Kingdom market was most important for the export of canned fruit; that competition in this matter with British enterprise was unwarranted, and that costs of production for tinplate under a heavy tariff barrier were likely to be excessive.

### N.Z. Citrus Trade.

Appreciation was expressed for the services of the Embargo Abolition League, and it was decided to leave with the Board of the Federation the question of further support to the League.

### Pest Control.

Several resolutions were carried recommending that the Department of Agriculture be given more power to enable fruit inspectors to force owners of neglected orchards to destroy the trees or adopt satisfactory control measures.

### Alien Immigration.

There was a lengthy discussion on the subject of influx of foreigners into Australian primary industries. A resolution was carried expressing alarm at the continued influx of Southern Europeans, and requesting the Board to protest to the Prime Minister.

### Oranges Artificially Colored.

It was decided on the motion of Messrs. M. Brown (Kurrajong) and J. M. Hession (Oakville), "That all citrus fruits artificially colored and marketed during April and May should be labelled to indicate that they have been artificially colored."

### Fruit Industry Enquiry.

There was lengthy discussion on several of the contentious findings of the Fruit Industry Royal Commissioner. One recommendation was that the benefit of grading regulations should be extended to the consumers by compelling retailers to sell fruit according to the description, grade, and size under which they buy. This recommendation was approved by Conference.

### Fruitgrowers' Relief.

A motion was carried "That the Federation investigate the present application and administration of the Farmers' Relief Board, the Rural Industries Board, the Assistance to Settlers' Agency, and the Rural Bank, to protect any grower from suffering undue hardship and harsh treatment at the hands of such Government undertakings."

## EXPERIMENTS WITH NITROGEN

### Interesting Results.

**A** VERY comprehensive series of fertiliser experiments covering a period of ten years was completed recently by Dr. Franklin L. Davis, Soil Technologist, U.S.A. The experiments were designed to determine the effect of different types of nitrogenous fertilisers on (1) the yield of the crop, (2) the acidity of the soil, (3) the availability of phosphorus in the soil.

Nine different sources of nitrogen were used, and all treatments were replicated four times. The result of the ten years' experimental work is reported on in the "American Fertiliser," May, 1938. The largest yield for the ten year period were obtained from nitrate of soda and nitrate of soda-potash.

Dr. Franklin L. Davis made determinations of the soil reaction of each plot at the conclusion of the ten-year period of experimentation. It was found that the plots which did not receive nitrogen in the form of nitrate of soda were relatively acid in reaction. It was also found after ten years of continuous fertilising that the plots receiving different sources of nitrogen showed considerable variation in the amount of readily available phosphorus in the soil. Here again, plots which received nitrogen in the form of nitrate of soda contained larger amounts of readily available phosphorus than did the plots which received dressings of other nitrogenous fertilisers. Indeed, it was shown most clearly that the acid forming nitrogenous fertilisers did increase the acidity of the soil and reduce the amount of phosphorus which is readily available for plant growth.

Although Dr. Davis's findings were in regard to cotton and of little value to Australian farmers, as cotton-growing is not one of our major industries, yet the experiments do serve to demonstrate, in a very convincing way that the use of nitrate of soda is the most efficient and satisfactory way of supplying plants with their nitrogen requirements.

The other matters investigated by Dr. Davis, however, are of fundamental importance to all Australian farmers. It is well known that Australian soils are generally deficient in available phosphorus, and as a result superphosphate has been very widely used to rectify this natural deficiency. The work of Dr. Davis has shown clearly that acid forming nitrogenous fertilisers not only increase the acidity of the soil, but also deplete the supply of readily available phosphorus.

Under existing economic conditions it should be the policy of every intelligent farmer, orchardist, and market gardener to do his utmost to conserve and improve the fertility of his soil.

Nitrogen supply is such an important factor in profitable agricultural production that the grower is well advised to use an alkaline source of nitrogen, such as Chilean granulated nitrate of soda, so that the maximum yields may be obtained without any risk of increasing soil acidity and reducing the amount of available phosphorus in the soil.

## Victorian Fruit Marketing Association

**A** MEETING of the Executive of the Victorian Fruit Marketing Association was held in the Board Room of the Commercial Travellers' Association, Melbourne, on Friday, June 16, 1939, at 10.30 a.m.

There Were Present: Messrs. W. P. Hutchinson (President), W. H. Carne and A. S. Harrison (Vice-Presidents), J. B. Mills, F. Moore, H. J. Noonan, J. J. Tully, G. H. Sprague, L. G. Cole, E. Russell, S. Brown, K. Weeding, W. Young, G. Douglas, K. V. Eagle, H. M. McLean, F. R. Mellor, F. Cave, R. A. W. Bailey, E. Noonan (Southern Growers' Association), W. A. Thiele, F. M. Read (Acting Superintendent of Horticulture), W. M. Carne and E. N. Robinson (Department of Commerce), and the Secretary, R. E. Boardman.

### Apple and Pear Board.

Mr. H. W. Carne congratulated Messrs. J. B. Mills, W. P. Hutchinson and W. Young on being appointed to the Apple and Pear Organization Board, and Mr. Mills on being elected Chairman.

Mr. Mills stated that at the first meeting of the Board much time had necessarily been taken up with examining the budgetary position and creating the machinery for the Board to function. The forms for export licenses were being drafted. He was impressed with the spirit of harmony in adjusting Interstate differences.

Mr. Young said that the preliminary work for the functioning of the Board included details concerning office accommodation, staff, etc. The industry was being viewed from an Australian-wide angle, and he felt sure that good work would be accomplished. The V.F.M.A. was needed as the link between the Board and the growers.

Mr. Hutchinson stated that whereas at the moment there were difficulties in the way of State Associations securing portion of their needed finance from the Board on the same basis as from the Council, this matter was being investigated. The goodwill of the growers was needed for the effective functioning of the Board. The levy would be 3d. per case on all Apples and Pears exported, of which 3d. would probably be used for publicity in the United Kingdom. A levy of 3d. per case on all Apples and Pears marketed in Australia, other than for canning, would be collected as from January next, for publicity.

In reply to Mr. Eagle regarding publicity in England and Australia, Mr. Mills stated that the amount provided by growers for publicity in England was supplemented by a Government grant and by contributions from the British trade. Further, very large sums were paid for publicity in England by dried fruits, butter, canned fruits and other industries, which contributed substantially to the overhead charges, thus enabling full value to be obtained from the amount contributed by the Apple and Pear interests.

It was further pointed out that with regard to publicity in Australia, apart from radio and press advertising, funds were needed for such features as Garden Week, Apple Week,

conducting handwriting competitions, visual education films for schools, recipe books and pamphlets, fruit for school distribution and general educational propaganda.

There was a full discussion on various aspects of the levy for finance for the V.F.M.A.

Mr. Noonan moved, Mr. Cole seconded:—

"That a Committee of five be appointed to determine the matters regarding finance and report back to the Executive."

Mr. Young deemed this resolution premature, and advised deferring the matter until further advice was received from the Board, which was fully alive to the situation.

In further discussion the need for the industry to speak with a united voice was stressed. In view of the fact that further advice would be forthcoming after the Board had given consideration to the matter, the motion was withdrawn.

### Marine Insurance.

Letter received from the Apple and Pear Council enclosing letter from the Marine Underwriters' Association, quoting new clause giving adequate cover for breakdown of propelling machinery in addition to breakdown of refrigerating machinery. Mr. Mills stated that for those who desired this new protection it was available without additional charge, and that for policies not including the Witherby Clause (breakdown of propelling machinery) a reduction of 3/- per cent. was available.

### Apple and Pear Publicity.

Letter received from the Apple and Pear Council asking if approval could be given to the advance of £1,500 from the Council's funds for Apple and Pear publicity in Australia. The Secretary reported that during the recess this matter had been referred to Executive members, who generally approved. Action endorsed.

Press clippings were tabled, revealing considerable press publicity of an educational character in the news columns of the Australian newspapers.

The Secretary tabled programme for Apple Week, Melbourne, June 19 to 24. Mr. Noonan stated that the Apple Week programme had been efficiently prepared. The Apple Week Committee was functioning as a Sub-Committee of the Victorian Section of the Australian Markets Committee. The construction of the Committee and their operations needed to be more clearly defined. Mr. Moore moved, Mr. Cole seconded:—

"That three delegates from the V.F.M.A. be appointed, together with three delegates each from the Cool Stores Association, Northern Fruitgrowers' and Southern Fruitgrowers' Association, to the Victorian Section of the Australian Markets Committee (with power to co-opt others)." Carried.

Messrs. H. J. Noonan, W. A. Thiele and F. Cave were appointed to represent the V.F.M.A. on the Victorian Section of the Australian Markets Committee. It was decided to write to the other Associations for the names of their delegates. Appre-

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ciation was expressed by several members for the excellent work of the Apple Week Committee. Mr. E. Noonan stated thanks were due to the Department of Agriculture for valued assistance.

#### Empire Fruits Council.

The Apple and Pear Council wrote enclosing the agenda for the Empire Fruits Council Conference, to be held in London, June 20 to 30. This in-

cluded such items as quotas for exports of Apples from the Dominions, the Anglo-American trade Agreement, also the question of the establishment of permanent machinery for co-operation between the principal Empire and foreign countries which supply Apples and Pears to the United Kingdom markets. The matter of convening an International Fruit Conference had also been proposed.

Mr. Mills stated that Mr. Everard Ross, the representative of the Apple and Pear Council in London, would attend and represent the Apple and Pear Council. The views of the Council had been submitted to Mr. Ross, insisting on the rights of the Dominions to decide their own policy regarding quotas, rather than that these should be imposed by any other body. Action endorsed.

### PEACH CROP THREATENED.

#### Outbreak of Peach Aphis Possible.

#### Warning by Government Entomologist to Use Tar Distillate Spray.

After a survey of Peach growing areas in Victoria, the Government Entomologist (Mr. R. T. M. Pescott) states that the indications point to the possibilities of a severe outbreak of Peach Aphis.

Never before, states Mr. Pescott, have such enormous quantities of aphis eggs been observed in all Peach and Nectarine trees.

He recommends growers to spray each tree, taking care to miss no bud, with tar distillate, one gallon to 35 gallons of water.

On the thoroughness of this spray, which must be applied by mid-July, will depend the success or failure of the season's crop.

#### Fruit Juices.

The Apple and Pear Council wrote enclosing advices received from the Council for Scientific and Industrial Research, in which details were given regarding the activities of the C.S.I.R. in constructing a laboratory at Homebush, N.S.W., for extracting, bottling, canning and sterilising fruit juices.

It was decided to write to the C.S.I.R. in terms of appreciation.

#### Fruit in Cool Storage.

Letter received from the S.A. Fruit Marketing Association directing attention to the activities of the S. Aust. section of the Australian Markets Committee, and stating that as a beginning to the work of co-ordinated supplies for Australian markets, there was need for monthly statistics as to the quantities of fruit held in cold storage in the several States. They submitted figures of the fruits held in cool store in South Australia.

It was decided to refer this matter to the Cool Stores Association.

The Chairman directed attention to a paragraph in the "Argus" of June 16, quoting official figures from the Government Statist as to fruit in cool store in Victoria, with comments which were deemed to be misleading to the public.

Mr. H. J. Noonan stated that the understanding was that the Government Statist, in compiling the figures, was under obligation to publish them, but that in doing so the figures were to be given for publication without comment.

Decided on the motion of Messrs. Tully and Sprague to write, directing the attention of the Government Statist to the publication of the figures in the "Argus," in which comments were embodied, and also to write to the "Argus" directing attention to this matter, and requesting the co-operation of the Cool Stores Association to prevent a repetition of the publishing of comments.

#### Export Regulations.

The Secretary reported that during the recess a letter had been received from Mr. D. D. Grant, Drouin, asking as to the possibility of getting the export regulations altered to allow smaller size "London Pippin" and "Rokewoods" to be exported. This matter had been placed before the Department of Agriculture and a reply had been received from the Department, sympathetically noting the request, but pointing out that the regulations had to be administered from the Commonwealth-wide aspect, and conditions applying to one State were not necessarily those of another. Mr. Grant had been advised to this effect.



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Mr. W. H. Carne spoke in favor of altering the regulations to provide for the export of 2½ in. "Rokewoods."

Mr. Read stated there was need for means of more easily altering regulations when the need arose.

Mr. Mills said that this matter involved color qualifications and suggested an approach to the British trade for their views, as smaller sized Rokewoods were very suitable for re-export to distant countries.

Decided to refer this matter to the new Board.

#### Tariff on Fruit Containers.

The Apple and Pear Council wrote stating that success had attended their efforts in approaching the Customs Department for the cancellation of a regulation which had been issued under which duty had become payable on timber used for cases which were not sold with goods. The Secretary reported that with the issuing of the By-Law referred to, duty had become payable on timber used in various storage and lug boxes, as these were not sold with the goods, but as the new regulation had now been withdrawn the position had been reverted to which existed prior to the issuing of the regulation. Noted with appreciation.

#### Liners for Pear Boxes.

Mr. Weeding reported that the approach to the Customs Department had been successful in the effort to secure a refund of duty paid on imported liners for Pear boxes.

#### Trade With Foreign Countries.

Letters received from the Department of Commerce in relation to trade with Sweden, Switzerland, Denmark and France.

#### Freight for Port Said.

The Apple and Pear Council wrote stating that despite their efforts, O.S.R.A. had not consented to a reduction in the freight on fruit to Port Said.

#### Chamber of Agriculture.

Report received of the 37th Annual Convention at Warrnambool.

#### Optional Bills of Lading.

Letter received from the Apple and Pear Council quoting resolution from the 1938 Sydney Conference, objecting to the issuing of optional bills of lading for fruit cargoes as between U.K. and the Continent, also enclosing letter from O.S.R.A. sympathetically noting the matter, but regretting inability to prevent the owner of the goods from discharging cargoes in U.K., even when these had been originally consigned to the Continent. Mr. Mills directed attention to the dangers inherent in this procedure, including the possibility of the evasion of the U.K. quota and evasion of export regulations regarding varieties and sizes of fruit for the U.K. market. Referred to Apple and Pear Board.

#### State Quotas.

Report received from the O.S.R.A. per medium of the Apple and Pear Council, stating that while in sympathy with every effort to observe the quotas in accordance with State forecasts, they felt they could best assist by keeping in constant touch in supplying details regarding ships and the quantities loaded. Referred to new Board.

#### Trade With Colombo.

Letter received from Lawforths Fruit Exchange telling of consignments of "Granny Smith" and "Rokewood" Apples, duly passed after strict inspection, condemned at Colombo for "Caterpillar Borer." This matter had been taken up with the Apple and Pear Council and the Commerce Department. The Department of Commerce had written enclosing a letter

from the Ceylon Department of Agriculture stating that fruit from Victoria and another State were infested with "Caterpillar Borers."

Mr. Read stated that specimens sent by the Colombo Authorities had revealed a negligible amount of Codlin Moth (probably hatched on the voyage). As regards the Victorian consignments, they were sound commercial lines.

Mr. Weeding directed attention to the increasing difficulties in trading with Colombo. Noted.

#### Harcourt.

Delegates from Harcourt reported that certain assistance had been rendered by the State Government to those who had suffered from the water shortage at Harcourt.

#### Fruit Packers.

The Chairman directed attention to the need for qualified packers, as a standard pack from Australia was needed. There was a shortage of good packers. Appreciation was expressed to the Department in their work in training fruit packers.

Mr. Weeding moved:—

"That this Association requests the Department to continue and extend its packing class facilities, and further that a system by instituted by the Department for the issuing of certificates to qualified packers."

Mr. Bailey, in seconding, stated that packers trained in Departmental classes were the best. He emphasised the need for central packing sheds in each district. Carried.

#### N.S.W. Fruit Industry Inquiry.

Report was tabled showing the recommendations of the N.S.W. Fruit Industry Inquiry Commissioner. It was pointed out that several of these recommendations, if applied, would

have serious repercussions in Victoria. Noted for attention.

#### Cool Stores Association.

Letter received from Mr. W. A. Stewart, 34 Queen-street, Melbourne, stating he had been appointed Secretary of the Cool Stores Association, and requesting communications to be sent to him. Noted.

#### Bounties for Primary Industries.

Mr. S. Brown directed attention to press reports of bounties on wheat and wool, requesting that this matter be viewed as affecting all primary industries. He moved:—

"That when the question of bounties to the wheat and wool industry are being discussed by the Premier's Conference, the condition of all primary exporting industries should be reviewed."

Mr. Carne seconded. Carried.

#### U.S.A. FRUIT EXPORTS.

#### Fresh Pears and Grapes Set Record.

U.S.A. exports of fresh Apples during the 1937-1938 season, July to June, jumped to 10,960,000 bushels compared with 6,800,000 bushels shipped the preceding season. This was principally due to the large Apple crop in 1937 and the resulting low prices. The United Kingdom was the principal market, accounting for 39 per cent. of the total shipments—5 per cent. more than the proportion taken in 1936-1937.

Exports of fresh Pears amounting to 2,694,000 bushels and Grapes amounting to 35,000 short tons set an all-time record. This was an increase of 68,000 bushels of Pears shipped over the year previous and 7,000 more short tons of Grapes.

#### FRUIT PRICES IN LONDON.

#### Australian Apples and Pears.

#### Apples.

Tasmanian: Ex "Esperance Bay," "Port Nicholson" and balances ex "Sydney Star" and "Orford": Cleos., 9/- to 11/6; Jonathan, 10/- to 12/-; Sturmer, 9/6 to 12/9; Cox's, 10/3 to 11/9; Granny Smith, 12/9 to 13/6.

Victorian: Ex "Sydney Star" and balances ex "Orford": — Granny Smith, 12/3 to 14/3; Rome Beauty, 11/- to 11/9.

South Australian: Ex "Sydney Star":—Rome Beauty, 10/9 to 11/6.

West Australian: Ex "Port Nicholson":—Dunn's, 11/3 to 11/9; Jonathan, 11/- to 13/-.

#### Pears.

Tasmanian: Ex "Sydney Star":—Winter Cole, 9/6 to 11/-; Comice, 12/3 to 14/6; Beurre Bosc, 9/6 to 11/-.

Victorian: Ex "Sydney Star": — Josephine, 13/6 to 14/9; Winter Nelis, 10/3 to 11/9.

#### Father's Mathematics.

Mother wanted to spend Saturday afternoon shopping, and father, a statistician, reluctantly agreed to abandon his golf and spend the afternoon with the three small and energetic children. When mother returned father handed her this:—

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# Market Notes and Prices

## FRUIT PRICES IN THE SYDNEY MARKET.

Survey of the Period May 25 to June 25, 1939.

**SEASONAL CHANGES** during the past four weeks, briefly summarised, have been the increased supply of citrus upon the market, the increased proportion of "Good" and "D" grade Apples, and a decline in the quantity of Pears available, states the report to hand from the Fruitgrowers' Federation of N.S.W. Market Representative, Mr. Pearce, in his monthly report.

The advent of the citrus season has provided some competition for the sale of Apples, and the quietness in trade that commenced at the end of April has become more pronounced, thus making retailers more fastidious regarding their purchases, with the result that lower values have had to be accepted for unpopular types and counts.

Tasmania had been forwarding heavy supplies of Pears, our May report estimating the quantity at 40 per cent. of the weekly shipments, but this proportion has now dropped to probably 10 per cent. The comparative shortage of Pears had resulted in steady demand for sound types, and almost all arrivals have sold at satisfactory levels.

### Pome Fruits.

The month has witnessed a big increase in arrivals of French Crab, Scarlet Permain, and Rome Beauty, while Democrat and Sturmer of large size chiefly, have also increased. Cleos are a little less plentiful, also Geeveston Fanny, which showed disappointing keeping quality. Tasman's Pride are practically finished, some difficulty having been experienced in clearing late arrivals, owing to over-maturity.

Scarlet Permain are not at all popular in the majority of instances, and the price range of 3/- to 7/-, with a few 8/-, indicates the difficulty of clearing small sizes and also fruit that is lacking in the characteristic color.

Buyers are now sceptical regarding the value of Jonathan, this variety from N.S.W. and W.A. having finished early in June, while from Tasmania uncertain keeping quality is a feature of many arrivals.

Delicious from Tasmania are still appearing, and some extra fancy brands have sold to 13/-, but this value does not indicate the average market return, as very small fruit is selling as low as 5/-, with average sales around 10/-. Crofton have in many instances been placed in cool store. Granny Smith appear more plentiful this year than in previous years, and it is apparent that this variety is gradually supplanting the French Crab. Small Crabs have recently been very difficult to clear, and the same applies to inferior grades of Cleos.

With regard to N.S.W. Apples, we have recently received larger supplies of "Good" and "Domestic" grade Granny Smiths, and these have probably averaged from 5/- to 8/-, while fancy quality has been at 10/- and 12/-, and extra fancy in a few instances, when released from the Sydney cool store at up to 14/-. N.S.W. Apples, however, have been very scarce throughout the whole of the season, and Rome Beauty, Buncombe, Dougherty and Delicious have appeared in insignificant quantities. Large Democrats are being steadily unloaded, and the smaller sizes retained in cool store for release later in the season.

Winter Cole are still enquired for regularly, but are now fairly scarce,

while Packham's Triumph of large size, following dry weather experienced during the growing period, are mostly a little smaller than buyers would prefer. Josephine are more plentiful than during May, only the inferior grades, or fruit lacking life, being marketed at the present time. Winter Nelis have not been plentiful from any source, while other types are almost finished for the season.

The following are prices for Extra Fancy, Fancy, and Good:—Buncombe (N.S.W.), 8/- to 12/- per bushel; Cleo. (Tas.), 4/- to 7/6; Crofton (Tas.), 6/- to 10/-; Delicious (Tas. 5/- to 10/-, few 11/-), (W.A. 8/- to 12/-), (N.S.W.) 6/- to 14/-, few ex cool store to 16/-; Dougherty (N.S.W.), 8/- to 12/-; Demo. (Tas. 5/- to 8/-), (N.S.W.) 6/- to 8/-; French Crab (Tas.), 3/- to 7/-; Geeveston Fanny (Tas.), 4/- to 7/-; Grannys (Tas. 5/- to 10/-), (W.A. 8/- to 11/-), (N.S.W.) 4/- to 12/-, few ex cool store to 14/-; Jon. (Tas.), 5/- to 10/-; Romes (Tas. 5/6 to 9/-), (W.A. 8/- to 10/-), (N.S.W.), 5/- to 9/-, few 11/- per bushel; Sturmer (Tas.), 4/- to 6/-; Scarlet Permain (Tas.), 3/- to 7/-, few 8/- per bushel; Small and "D" Grade lower.

Beurre Bosc (Tas. and Vic. to 7/-), (N.S.W.) 6/- to 9/- per bushel; Glou Morceau (Tas.), 4/- to 10/-; Giblin Seeding (Tas.), 4/- to 9/-; Josephine (Tas. and N.S.W.), 5/- to 11/-; Packhams (Vic. plain to 9/-), (N.S.W.), 7/- to 14/-; Winter Cole (Tas. 6/- to 10/-, few 12/-), (N.S.W.) 5/- to 12/-, few 13/- per bushel; Winter Nelis (Tas.), 5/- to 10/- per bushel; Small and "D" Grade lower.

### Citrus Fruit.

During the last two weeks, trade in the fruit market has been extremely quiet, and all citrus, particularly Oranges, has felt the weakening demand and consequent lower values. The supply of Navel Oranges has increased, but not to the usual quantity, the recession in values being due

very largely to reduced turnover in the retail shops. The position with Apples is probably worse than with Oranges, and accumulated stocks of the former fruit are offering competition to Oranges owing to the low prices at which small and reasonably sound Apples are offered. A fortnight ago Navels of counts 138 and 150 were selling freely to 9/-, the 150 then becoming unpopular due to it being too small, in the opinion of the retailer, for selling at 1/- per dozen. Count 138 gives indication of joining count 150, and in some instances buyers have been able to purchase count 100 at 6/-, this becoming the 1/- per dozen size.

It may be considered that values are still reasonably satisfactory when the per case price is compared with that of previous years, but when consideration is given to the light crops experienced and the unaltered cost of production it will be realised that a higher price per case than usual is essential if the producer is to receive a payable return. The peak period of marketing is probably just approaching and the present appears to be the opportune time to publicise the health value of Oranges and the large size of the fruit.

Irrigation Area arrivals on the Sydney market are mostly crates of large size; publicity therefore appears necessary immediately. Other types of Oranges, such as White Siletta and Joppa experienced good sale for retailing at 6d. per dozen, but these also have receded to around 4/- per bushel.

Lemons are not as plentiful as is customary at this season of the year, but supplies have been inclined to accumulate just recently, and the 6/- and 7/- level recently obtained appears to be now impossible with the exception of better than average coastal fruit. Grapefruit has been of better quality than usual, and most sales have been around 5/- and 6/- with exceptional quality fruit higher, special Wheeney having sale to 11/-. A few cases from Narromine have

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Dexing Bros. F. G. Stevens & Son.  
F. G. Dickson. Thompson & Smith.  
Dunston & Norris. A. R. Terrill.  
G. Gray. Wing On & Co. Ltd.  
S. & M. Greenburg. Wing Sang & Co.  
C. C. Greentree & Co. Ltd.  
Son. Wing Bros.  
J. Hawke. W. O. Woods.  
A. Leadow. Yocksni Bros.

P. S. MACDERMOTT,  
General Secretary,  
215a Thomas St., Haymarket, Sydney.



benefited by their reputation for quality and standard pack, and have realised 14/-, these being Marsh Seedless.

Mandarins have not been in excess supply, and fruit with firm skins and of good appearance has sold reasonably readily at 6/- and 8/-, counts 220 to 250 moving a little more freely than the larger sizes. Some growers will have received disappointing prices for Mandarins due to handling the fruit whilst moist, the darkened appearance and resultant wastage deterring buyers from purchasing these types.

The following are prices received:—  
**Grapefruit:** N.S.W., local 4/- to 6/-, few Wheneey to 11/- per bushel; inland, 6/- to 8/-, few 14/- per bushel.  
**Lemons:** N.S.W., Standard and Special, local, 3/- to 5/-, few to 6/- per bushel; Standard and Special, inland, 6/- to 8/- per bushel; plain grade, 3/- to 4/- per bushel.  
**Mandarins:** N.S.W., Emperor, 5/- to 7/- per bushel; Thorny, 3/- to 5/- per half bushel.

**Oranges:** Navels, N.S.W., Counts 56-88, local 5/- to 6/-, inland 5/- to 6/- per bushel; counts 100-125, local 5/6 to 7/-, inland 5/6 to 7/-, few 10/-; counts 138-198, local 5/- to 6/6, inland 5/- to 7/-, few 10/-; counts 216-252, local 5/- to 6/- per bushel; two bushel crates, 9/- to 12/-; plain from 8/-. **Other Oranges:** 3/- to 4/6 per bushel.

Tropical Fruits.

**Strawberries** made an appearance from Queensland during the second week in June, but supplies are not yet extensive. **Pineapples, Papaws, Custard Apples and Avocado Pears** have come forward regularly, the latter in very small quantities only. **Passionfruit** has been more plentiful during the last two months than for the past twelve months, but supplies have moved satisfactorily owing to the operations of processors who have purchased at 5/- and 6/-, while buyers for the Interstate markets have also operated.

Frosts and cold weather affected the quality of **Tomatoes** about the middle of June, and a slight improvement occurred in the value of special quality fruit. Supplies had been more extensive than is usual at this time of the year, and are still coming forward in large quantities, the bulk of supplies arriving from Queensland.

**Prices—**  
**Avocado Pears:** (Q'land), 8/- to 12/- per half bushel.  
**Bananas:** (N.S.W. and Q'land), regulation graded, first quality fruit, 10/- to 18/-, ripe lower per tropical case.  
**Custard Apples:** (Q'land.), 5/- to 7/- per half bushel.  
**Passionfruit:** (N.S.W.), 3/- to 7/-, few higher per half bushel; (Q'land.), 3/- to 7/- per half bushel.  
**Papaws:** (Q'land.), 8/- to 10/-, few higher per tropical case.  
**Pineapples:** (Q'land.), 7/- to 12/- per tropical case.  
**Strawberries:** (Q'land.), 2/- to 5/- per tray, 9/- to 12/- per dozen boxes; (N.S.W.), 12/- to 15/- per dozen punnets.  
**Tomatoes:** (N.S.W.), 3/- to 5/- per half case; (Q'land), 3/- to 5/-, few higher per half bushel; repacked, 4/- to 6/- per half bushel.

QUEENSLAND.

**Brisbane (21/6/39).** — Messrs. Clark & Jessor report as follows:—For the past month supplies of Apples have been heavy and prices have been easier. Cold weather has also had a depressing effect on the citrus market. Present values are:—Jons., 2½ to 2½, 10/-, to 11/-, smaller sizes 7/- to 8/-; other colored Apples, 8/- to 9/-; small sizes, 6/- to 7/-; G.S., 10/- to 11/-; Pears: W.C., 11/- to 12/-, small sizes 6/- to 8/-, other varieties of Pears

10/- to 12/-. **Oranges:** Navels, 8/- to 9/-; Common, 7/- to 8/-. **Mandarins:** Glens, 9/- to 10/-; Emperors and Scarletts, 5/- to 7/-. **Lemons:** 7/- to 8/-. **Passionfruit:** 9/- to 10/-. **Custard Apples:** 3/- to 4/- half case. **Pineapples:** Smooth, 7/- to 8/-. **Tomatoes:** 4/- to 5/-.

SOUTH AUSTRALIA.

Vegetable prices during June on the local markets were rather depressed owing to the large quantities being marketed.

Cabbages were difficult to clear throughout, and Cauliflowers, except for a firming mid-way through the month, were generally on a low figure.

Bunch lines were slow of sale, but Potatoes and Onions were firm in price, and at the end of the month showed a further price increase.

Fruit prices were steady, especially Apples, which are considerably shorter in supply than last year.

Hereunder is a list of quotations ruling on Friday, June 30.

**Bunch:** Per doz. bunches.—Beetroot 1/-, Parsnips 1/6, Rhubarb 1/-, Turnips 1/-, Swede Turnips 1/6.

**Vegetables:** Cabbages, 2/- to 3/- doz.; Cauliflowers, 3/- doz., special 4/- doz.; Peas, 8/- to 10/- bushel; Potatoes, 15/- to 16/- cwt.; Onions, 20/- to 22/- cwt.

Fruit.

**Apples:** Granny Smith, 8/- case; Delicious, 10/-; Jonathans, 9/-; Cleos, 7/-; Romes, 6/-; Londons, 6/-; Buncombe, 6/-.

**Bananas,** 20/- to 22/- case; Pineapples, 15/- to 17/- case; Coconuts, 3/6 doz.; Lemons, 6/- case.

**Oranges:** Navels, 6/- to 8/- case; Mandarins, 10/-; Grapefruit, 6/- to 8/-.

Fruit in Cold Store.

The Department of Agriculture advise that the quantities of fruit held in cold store in South Australia as at May 31, 1939, were as follow:—

	Cases.
Apples . . . . .	180,993
Pears . . . . .	4,176
Quinces . . . . .	32
Total . . . . .	185,201

VICTORIA.

**Melbourne (1/7/39).** — Wholesale Fruit Merchants' Association prices (per case): Apples, eating 6/-, 9/-, choice higher; cooking, 4/-, 7/-; Bananas, double case, 10/-, 17/-; Grapes, 4/-, 7/-, few higher; Grapefruit, 5/-, 8/-, selected higher; Lemons, 6/-, 8/-, selected higher; Mandarins, 5/-, 7/-, selected higher; selected red varieties, 10/-; Oranges, 4/-, 9/-, selected higher; Passionfruit, 6/-, 10/-, few choice higher; Papaws, 7/-, 10/-; Pears, 4/-, 10/-, choice higher; Pineapples, 8/-, 11/-; Tomatoes, W.A., half cases, 8/-, 10/- choice higher; Celery, S.A., 6/-, 9/-, choice higher.

NEW ZEALAND.

**Dunedin (23/6/39).** — Messrs. Reilly's Central Produce Mart Ltd. report as follows:—Small consignments continue to arrive and are meeting with a good demand. Good quality

Apples have been rather short of the enquiry, and values for these are slightly better. Fair supplies of Pears are coming forward, and values have improved slightly for these. Cooking Apples are also in fair supply with a good demand.

Local hothouse Tomatoes continue to arrive, and are bringing good prices. Small consignments of Gros Colmar Grapes are still being received. A consignment of Passionfruit came to hand from the north during the week, and met with an excellent demand.

The "Waitaki" brought forward the first shipment of Australian Navel Oranges for the season, approximately 3,900 cases being landed at Dunedin, including supplies for Oamaru and Timaru. The fruit was in excellent condition, and met with a keen enquiry. No Mandarins came to hand by this boat.

A small parcel of Pineapples also came forward by the "Waitaki," and these sold at very satisfactory prices.

A further shipment of Australian Lemons is due on approximately June 26. Sufficient supplies of Lemons are now being received to meet the demand.

Ripe Bananas are selling well.

**Prices (per case):** Cal. Grapefruit: 35/-. Australian Lemons: 30/6 to 40/6. Australian Navels: 16/- to 22/-. Marmalade Oranges: 16/- to 18/6. Bananas: Ripes, 22/6. Apples: Jons., 7/- to 10/-; Cleo., 6/- to 8/-; Del., 7/- to 10/-; Golden Del., 6/- to 10/-; G.S., 7/- to 10/-; Tasma, 6/- to 7/6; Sturmers, 6/- to 10/-; Ballarats, 6/- to 7/-; small grades, 3/- to 4/6; cooking Apples, 5/- to 6/-. Queensland

Pineapples: 26/-. Pears: Winter Coles, 7/- to 9/-; Winter Nelis, 7/- to 9/-; cooking Pears, 4/6 to 6/-.

N.S.W. EXPORT APPLE COMPETITION.

**First Prize Won by N. W. Ross, of Orange.**

The points awarded in London for the Royal Special Export Apple Competition, conducted by the Royal Agricultural Society of N.S.W. this year are as follows, together with those allotted at the Royal Easter Show in parentheses:—N. W. Ross, Mullion Creek, Orange, 85½ (90), total 175½, 1; W. S. Cripps, Cranbrook Orchard, Little Hartley, 78 (84½), total 162½, and W. Woolard and Sons, Woondoona Orchards, Newbridge, 73½ (89), total 162½, equal 2.

The competition was in respect of four cases, two each of two distinct varieties suitable for export. One case of each variety (two in all) were staged and judged at the show, whilst the other two cases were forwarded to London to be judged there.

The lady of the house had been interviewing an applicant for the position of cook. "Before I engage you, can you cook French dishes?"

"Rather, ma'am," she replied. "I understand all foreign dishes."

"What can you do in that line?"

"I can cook French beans, Brussels sprouts, German sausage, Dutch cheese and Spanish onions."

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**Victoria:** Harcourt Fruitgrowers' Progress Assn. Ltd. **Tasmania:** State Fruit Advisory Board.  
**Harcourt Fruit Supply Co. Ltd.** **New South Wales:** Griffith Producers' Co-op. Co. Ltd.  
**Victorian Central Citrus Assn. Ltd.** **Batlow Packing House Co-op. Soc. Ltd.**



# Motor Cars, Trucks, Tractors

## 55% AUSTRALIAN VEHICLES OBSOLETE.

In a recent American analysis of the proportion of modern to old cars throughout the world, it was stated that 55 per cent. of motor vehicles in use in Australia were eight years old or more. Best of all in this respect is Great Britain, with 90 per cent. of her vehicles less than eight years old.

According to this, Australia's position is bad from the point of view of the importance of efficient transport to the life of the community and its resources in an emergency. However, it is also a fundamentally sound factor, as it affects the prospect of new car sales in this country.

A total of 441,000 of Australia's motor vehicles are in the eight-years-or-older category, or the "shadowy zone," as the American analysis puts it; the "shadow zone" is inefficiency, danger, and obsolescence.

### Quadricoil Springing With 4-Way Stabilisation.

The chassis springs of a motor car, in order to provide maximum riding comfort, must have several important characteristics. These characteristics are:—

1. Have no other function but springing the weight of the car.
2. Be perfectly balanced in their action.
3. Have a constant rate of deflection throughout their entire travel.
4. Have uniform friction qualities and a minimum number of friction points.
5. Be unaffected by degree of lubrication or changes in temperature and weather.
6. Be soft enough to absorb even the smallest road irregularity.
7. Be simple and strong in construction.

In the past, it has been impossible to build a chassis spring suspension system that would embrace all of these important characteristics, because, in the majority of cars, the springs had a multiplicity of functions, such as holding the axles in perfect alignment and absorbing driving and braking forces as well as springing the car.

As a result, the chassis spring served as structural members, and it

was necessary to make them stiff and rigid. In addition, the leaf springs commonly used were difficult to balance in action and did not have a constant rate of deflection throughout their travel. Further, due to the inter-leaf friction, their action was greatly affected by lubrication and changes in weather.

Oldsmobile engineers have realised that these objections could be overcome by substituting coiled springs at each of the four corners of the car to replace the leaf springs, as this would permit perfect balance between front and rear springs—it would permit a constant rate of spring deflection throughout the entire length of spring travel, and would not be affected by the degree of lubrication or temperature or weather—also friction and lubrication points would be eliminated.

Now the development of the 4-Way Stabilising system in conjunction with QuadriCoil Springing, makes this possible.

QuadriCoil Springing and 4-Way Stabilisation, developed and proved by Oldsmobile, now makes it possible for the first time to build a car embodying all the proven advantages of a coil spring suspension system with an absolute control of all forward, backward, side to side, up and down, and rolling movements of the car.

### CHEVROLET IMPROVEMENTS.

Chevrolet engineers have simplified grille removal by redesigning the mountings so that only sixteen sheet metal screws need be removed to dismount the grille. The grille is now made in two halves which can be purchased separately. These refinements speed up replacements, and reduce labor costs in cases of accidental damage.

Three small changes in 1939 Chevrolet models also add to the comfort of the driver and passengers. Glass channels are improved so that windows raise and lower more easily, doors close smoothly, due to a newly designed safety check, and the improved sealing around the doors now keeps draughts out more completely. Similarly, the weatherstripping around rear trunk lids has been changed, the better to protect what is inside.

## FUSES THAT BLOW.

### Find the Cause.

It is obvious that if a fuse blows on several occasions there is something wrong, yet many motorists merely fit a new one instead of carefully examining the particular electric circuit affected.

The insulation on the wiring may have been severed by friction, thus causing an intermittent short circuit.

The adoption of color codes in the form of different colored insulation on the electric wiring system greatly simplifies the tracing of each circuit, and enables one to find, with comparative ease, any fractured or chafed electric wire which is causing trouble.

## DRIVING IN FOGS.

### Care Urged.

Motorists are reminded that at this time of the year fogs, or dense mists, are especially prevalent and they are urged to take every precaution against collision or running off the road.

If visibility is limited to a few yards drivers are advised to travel at a walking pace and follow the extreme lefthand edge of the road. At night the brightest of headlamps are useless in penetrating fog, the moisture reflecting the light into the driver's eyes. Better results are obtained by travelling with dipped headlights. Yellow headlamps or fog-lights are not allowed under the traffic regulations.

## RAILWAYS AND TRANSPORTS.

We are in receipt of a pamphlet issued by the Victorian Railways Commissioners in reply to the criticism by the Chamber of Automotive Industries, after the publication of "Starve Your Railways and Then—What?"

The N.S.W. Commissioner for Road Transport (Mr. Neale) has directed attention to the practice of some drivers leaving on the road the chocks of stone or wood they have used to hold a stalled car on a hillside. The practice is condemned as very dangerous to other drivers.

## R.A.C.V. TEXACO TEST.

### Average Consumption of 24.64 Miles Per Gallon.

The Texas Company (Australasia) Limited have just been issued with a certificate by the R.A.C.V. as a result of tests conducted over a distance of 125 miles. The test was conducted according to R.A.C.V. conditions and supervised by technical officers of the Club, at an average speed of 30.8 miles per hour. The car used was a Chevrolet Sedan, 1938 model. The test resulted in an average petrol consumption of 24.64 miles per gallon.

## LUBRICATE THE STEERING PINS.

Instances are known where otherwise conscientious owners neglect to lubricate the steering pins, states "The Morris Owner," presumably because the nipples in bad weather inevitably receive a coating of mud.

The importance of these two nipples cannot be over-stressed; lack of lubricant will mean stiff steering, and a shortened life for the pins, which are among the hardest worked components in the chassis.

## FITTING NON-SKID CHAINS

A knowledge of how to fit non-skid chains without jacking up the car will save a good deal of time, mud, and annoyance.

Lay the chains on the road along the wheel tracks, and back the car along them until it is within a foot of the ends. It is then a simple matter to encircle the tyres with the chains and to snap them together just below the guards.

When chains are to be used for a considerable distance, it is a good plan with many types not to rely entirely on the clips holding closed unaided. A couple of turns of wire around the clips will ensure against their opening accidentally and releasing the chains.—"R.A.C.V. Bulletin."

## WET IGNITION STOPS CARS.

With every wet spell or sudden shower of rain, cars suffer many breakdowns through water finding its way on to the ignition system.

If a car which is exposed to heavy rain stops or cannot be started, never lift the bonnet, as this aggravates the trouble by allowing more moisture to reach the ignition system. If the engine is warm, the heat may dry out the moisture and after a short spell, the motor will probably start.

If the engine fails to function at the second application of the self starter, then skilled attention should be sought as further efforts will only run down the battery and add to the trouble.

## CARBURETTER NOT TO BLAME.

The carburetter is often blamed for irregularities when other factors are responsible, the most common places of which is the sooting-up of plugs; indeed these and other ignition faults account for 80 per cent. of complaints.

Spitting back in the carburetter is not a carburetter fault at all, but usually results from sticky exhaust valves rather than inlet, as the latter seldom stick.

## SPECIAL NOTICE TO FRUITGROWERS

All Members  
under  
Fidelity Bond

In response to numerous requests from growers for information as to who are members of the Wholesale Fruit Merchants' Association of Victoria the following list is given. All are members of the above Association, and are registered firms carrying on business in the

WHOLESALE FRUIT MARKET, MELBOURNE.

STAND NUMBERS ARE AS INDICATED IN PARENTHESES.

T. STOTT & SON (26).  
H. L. E. LOVETT & CO. (23).  
A. E. PITT (14).  
J. DAVIS PTY. LTD. (8).  
W. S. TONG (31).  
SILK BROS. PTY. LTD. (24-25).  
J. G. MUMFORD (35).  
GOLDEN VALLEY FRUIT CO. PTY. LTD. (15).  
J. W. ROSS (13).  
H. M. WADE & CO. (21).  
DAVID SMITH PTY. LTD. (3).  
SILBERT SHARP & DAVIES PTY. LTD. (17).  
WATKINS FRUIT COMPANY PTY. LTD (5)  
P. A. PATRIKEOS (36).

G. WOOLF & SONS (29-30).  
R. CORNISH & SONS (5).  
J. HYMAN & SON (51).  
HERBERT WILSON PTY. LTD. (10).  
FRANK BOOTH & SONS PTY. LTD. (16).  
GEO. LISTER PTY. LTD. (12).  
TIM YOUNG & CO. PTY. LTD. (18).  
F. W. VEAR PTY. LTD. (28).  
YEE HOP LOONG & CO. (32).  
H. LOUEY PANG & CO. PTY. LTD. (4).  
WING YOUNG & CO. (38).  
D. MENTIPLAY & CO. PTY. LTD. (27).  
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REGAN & KENNY (Successors to Wm. Sweeney). (33).

Correspondence is invited by the Association.

Office : 21 Wholesale Fruit Market,  
Queen Street, Melbourne. Phone: F 4866.



## The Pig Pen

### KEEPING PIGS HEALTHY.

BY THE GENERAL PRACTICE of hygiene and sanitation in the piggery, coupled with sound feeding methods, the incidence of most pig diseases can be considerably reduced.

The provision of roomy, well-ventilated, but draught-proof sties is essential.

The floors should be swept clean every morning, all refuse being taken away, and the yards raked over. Correct drainage of sties and yards will avoid the accumulation of water and help to keep down insanitary conditions.

Moisture is necessary for the free living stages of nearly all worm parasites; in its absence very few of them can survive for any length of time. Therefore, pig keepers who wish to avoid losses from worms must have dry, well-drained sties and yards.

Unhygienic and insanitary conditions are predisposing causes of rheumatism, catarrh, and some of the more serious bacterial infections—such as suppurative otitis and pneumonia. Piggeries should, therefore, be constructed on high ground, floors should be made of concrete and the run should be well sheltered from inclement weather.

Correct feeding and watering, together with adequate housing and paddocking, are undoubtedly most important factors in the preservation of the health of the pig. — ("Qld. Agric. Journal.")

### CAREFUL HANDLING OF PIGS.

Before leaving the piggery, pigs should be plainly fire-branded, preferably on the centre of the back, just behind the shoulders, states the N.S.W. Department of Agriculture Bulletin. The agent or factory manager should be advised regarding the brands used in the consignment, so that when the pigs arrive at their destination they can be distinguished and no error made as to their ownership. Such a system of fire-branding would also be very useful in tracing diseased animals and cleaning up affected piggeries.

Careful handling is a very important point. Bruises and whp marks often show out clearly on the carcass, causing loss to the curer and reacting unfavorably on the producer. The pigs may, of course, be bruised in the trucks, and this cannot very well be obviated, but the owner should exercise the utmost care in preventing bruising while the animals are under his control.

If it could be conveniently arranged in the different districts, slaughtering days could be made known by the factory and a conference of producers could be called. They might spend the day together discussing various matters, inspecting the factory, the killing and weighing, etc., of the pigs, and most beneficial of all, seeing the various qualities or grades of meat as supplied.

Many farmers do not realise that some breeds of pigs give carcasses that are not at all suitable for trade requirements, although the animal looks right when alive. The only place to see the result of good or bad breeding is in the factory. Such an opportunity of inspection would be of immense value to those engaged in the production of pigs for market.

Pigs are often held too long on the farm, and when marketed are over the profitable age limit, being too fat and heavy.

## Home Section

### Some New Apple Recipes Demonstrated During Apple Week

During Apple Week many new and interesting recipes were demonstrated by various organisations, including schools, the Electricity and Gas Companies, and the Emily McPherson College of Domestic Economy. The following recipes were demonstrated by Madame Karola Stark, of Vienna, at the Emily McPherson College.

#### Apfel Strudel (Apple Strudel).

Pastry:  $\frac{1}{2}$  lb flour, 1 tablespoon olive oil, pinch of salt, water.

Filling: Apples—peeled, cored, and sliced, Sultanas, Breadcrumbs fried in butter, castor sugar and cinnamon, melted butter.

Method: Put the flour on a pastry board, and make a "well" in the centre; into this pour the oil, and add a pinch of salt. Mix first with a knife, then knead with the hands, adding a little water gradually. Work 15-20 minutes, taking the dough into the hands, and beating on the board. When it shows bubbles and no longer adheres to the hands, put it on floured board, cover with a basin, and let it stand for 20 minutes. Put a large clean cloth on the kitchen table, sprinkle with flour and roll out the dough. Lift the dough, and, with the back of the hands under it, pull and stretch it carefully until it reaches the size of the cloth, and is very thin and transparent (this is not an easy thing to do, and practice and experience are required to do this pulling without breaking the very thin paste). Lay the paste on the cloth, and carefully trim off the pieces hanging over the side of the table. Brush over the paste with butter. Fry the breadcrumbs, add to them the sliced Apples, Sultanas, sugar and cinnamon, and spread this mixture over the pastry. Lift the two corners of the cloth in both hands and roll the paste into a long thin sausage shape. Bend it, and place carefully on a well-greased

tin, brush over with melted butter or fat, and beaten egg, and bake till golden brown; sprinkle with sugar, cut into thick slices, and serve hot or cold with or without cream.

#### Apfel Reis (Apple Rice).

Apples (peeled and sliced), Patna Rice, butter, chopped Almonds, Sultanas, sugar, cinnamon.

Method: Grease a dish well with butter, wash the rice, place in the dish layers of Rice, Apple slices, Sultanas, sugar, cinnamon and chopped almonds to fill the dish. The top layer must be Apples. Dot with butter, cover well with water, bake in a moderate oven. Serve hot or cold with cream.

The Metropolitan Gas Company experts demonstrated the making of—

#### Apple and Pumpkin Pie.

Pumpkin, Apples, spice, water, sugar, pastry.

Prepare some ripe Pumpkin by peeling, removing the seeds and pulpy part from inside and cut it in slices. Peel and slice thinly the same quantity of sour and juicy Apples. Put the Pumpkin and Apple into a pie dish with sugar to taste and a small quantity of mixed spice, or if preferred, a little grated Lemon rind. Pile the mixture rather high in the centre of the pie dish. Now cover the pie with short crust or other pastry, brush it over with white of egg or water, dredge with castor sugar and bake in a good oven until the pastry is well browned and cooked, and the Apple and Pumpkin soft. Serve hot with cream or custard.

This is a very good combination, as the tart flavor of the Apples brings out the flavor of the Pumpkin. If Pumpkin and Apple are first cooked and mashed and yolk of egg and sugar beaten in, it makes a richer pie.

## Poultry Notes

### HELP THE MOULTERS.

#### Prepare for Hatching.

By now practically all pullets, at least those worth keeping, should be laying well, and the older birds should be over the moult and facing another heavy year of production. In writing upon this season, Mr. F. Wormald, of Gawler River, S.A., in the "S.A. Journal of Agriculture," advises the addition of 5 per cent. linseed meal in the mash to provide protein for the growth of new feathers. The better the birds get through the moult, recuperate from last season's strain of laying, and give an indication of being on the job in good fettle, the bigger will be the egg basket during the coming flush period.

Now, too, all incubators and brooders should have been cleaned up and be ready for use, rather than leaving this most important job till the last moment, when you will be busy on a hundred and one jobs that require attention. The methodical poultry farmer will plan his work and work his plan and so conserve his energies for the heavy season ahead.

Brooding and rearing houses should have been prepared, grass runs sown for the youngsters and any extensions of sheds provided for to take the increased flocks that are anticipated in the coming season.

"And if I refuse you, Cecil—will you commit suicide?"

"Well, that has been my usual custom."

### SEASONAL HINTS.

The following hints will prove of use in preparing for the new season:

1. See that the birds in the breeding pens are free from vermin, and examine the male birds frequently throughout the season to ensure that they are kept free from body lice.

2. In order to keep the male birds in good condition it is advisable to give them a feed of whole maize at mid-day. If they become poor in condition at any time during the season, bad hatching results may be expected.

3. An adequate supply of green feed for the breeding stock, and the use of up to 50 per cent. of maize for the evening feed will tend to improve results.

4. The growing stock yards should now be empty and spelling for the new season's young stock.

5. At the end of this month a count should be made of all birds for stock-taking purposes. Having a record of the birds also enables a check to be made on production from month to month.

### FRUIT IN COOL STORE.

It is estimated that, at the end of May, 1939, there were 153,050 cases of Apples and 10,678 Pears in cool store in South Australia; 180,993 cases Apples, 4,176 cases Pears in New South Wales; and 787,000 cases of Apples in Victoria.

### ALIEN MIGRATION.

#### Chance Required for British Ex-Service Men.

IN a recent signed article in "The British Legion Journal," Mr. Stephen Kelley, Chairman of the Metropolitan Area of the British Ex-Service Legion, records his impressions of Australia, gained last year on a tour of some 10,000 miles through Victoria, New South Wales, Western Australia, South Australia and Tasmania.

Mr. Kelley is of the opinion that the question of migration is an extremely vital one, not only from the Australian viewpoint, but an Imperial one. He considers that at the present time migrants of British origin are not encouraged, however much Australian authorities may protest to the contrary. Foreigners are to be found forming national communities in various places. In the sugar districts in particular the Italian population is so dense that public notices are often printed in Italian. Instances have been recorded when Italian parents have resisted the teaching of the English language in State Schools. The authorities in places like Shepparton (Victoria), and Leeton (N.S.W.), are so concerned that they have requested that no more aliens be sent into these districts.

It is optimistically thought, continues Mr. Kelley, that these Southern Europeans may in a decade or so be quite one hundred per cent. Australian, with an Australian, and possibly Imperial outlook. However, judging by present indications, this seems extremely unlikely, and very little can be expected of their children reared in an atmosphere almost entirely national.

It does not seem impossible that a country, estimated as capable of supporting twenty millions, could, by careful and organised methods, absorb every year a substantial number of time-expired British ex-service men, trained and ready for any emergency.

Mr. Kelley is not of the opinion that farm schools are of any real use in this matter, as he fears the trainees will drift into "dead-end" jobs without any chance of starting on their own.

However, the canned fruits industry offers a bright opening, only 25 acres being considered necessary to make a living, which can be worked almost entirely by a man and his family. As every can of Australian produce is in a container made of tinplate from the South Wales districts, this is not only non-competitive with British production, but represents the ideal reciprocity.

Mr. Kelley was very much impressed with the work done by Imperial Ex-Service Men in the Goulburn Valley of Victoria, and considers that besides deserving the support of every British housewife, much assistance could be given by the British Legion.

### REWORKING OF POME FRUIT TREES.

#### Supply of Grafting Wood.

The most satisfactory method of reworking unprofitable varieties of pome fruits to the more popular types is to employ the side graft, states the N.S.W. Department of Agriculture. This requires a very large number of grafts for each tree. Grafting scions should therefore be secured during pruning in sufficient quantity to ensure ample being available for grafting in the Spring.

Storage by burial in a cool position or stratifying in boxes of sand and cool storing ensures good condition being maintained.



# Marketing Pome Fruits Out of Season

THE EARNEST ATTENTION of all interested in the production and sale of Apples is directed to the very important matter of marketing the fruit when it is at its best.

Particular reference is made to this subject by the market representative of the Fruitgrowers' Federation of N.S.W., who writes as follows:—

Almost every year there are instances of pome fruits, particularly Apples, being marketed "out of season," that is, either after the life has left the fruit or popular demand has waned. In the former category is the fruit that has been preserved in cold storage without visible change, but which has lost all flavour and semblance of texture to the variety as it is known at its best.

Unfavorable repercussions to these happenings are twofold.

(1) Some loss of demand for that particular variety of Apple, for Apples generally, and possibly for that particular grower's brand of fruit.

(2) Low market returns, probably well below the cost of production aside from cost of selling, transport, case, packing, and refrigeration charges, and, what is not to be overlooked, irritation to the agent who has the out of season fruit encumbering his limited selling space, and in addition, is hampered in finalising his account sales for the particular consignment.

Probably the chief economic loss from this bad judgment of the market is borne by the producer responsible, hence it is a matter of personal interest for every pome fruit grower to protect his own pocket by marketing when popular demand is

stable or on the increase, and not to speculate with the unknown future. There are exceptions to this rule, of course, particularly where group marketing enables a familiarity with seasonal conditions.

There are always potential buyers who are willing to back their judgment of fruit and the prospects of the season by purchasing lines of fruit, and encouragement of these investors by gradually unloading the crop, is spreading the risk that is always present, and also keeps the market active, thus enabling one to feel its pulse.

It may be said that repercussions upon the industry are still likely to occur, if the investor holds his purchase until breakdown appears and a rapid unloading on to the consuming public becomes necessary. This is true, although the expert knowledge that such investors possess minimises the risk of such a happening to a great extent.

Frequently, fruit is held long past the optimum time for marketing as a result of producers attempting to pick and pack the crop in their own time and with a minimum of expense

in wages. Limited available finance dictates this attitude on occasions, but the security on existing liabilities is weakened by the absence of that little extra amount that would enable marketing more promptly, when the fruit is approaching maturity and buyers are more interested.

In another class is the producer who disregards the competition of later varieties and the product of other States, or of other kinds of fruit, and, believing that his fruit has long life, spreads his marketing season unduly in the expectation of receiving high prices through having the market to himself. Greater contact with the selling markets would acquaint this grower with the fact that when the bulk of a variety coming forward is showing uncertain quality, buyers turn to the next seasonal variety or fruit, the earlier type immediately slumping in value with stocks accumulating.

There are regular perennial happenings of this nature, and sometimes annual surpluses where one variety has an unusually limited marketing period due to the necessity of early forwarding of a large crop of the next variety. Short period surpluses must occur, and the handling of these can best be done by short term intensive advertising to increase consumption.

The suitability of certain districts to the production of late varieties possessing long life, and the efficiency of cool storage in maintaining appearance, has in recent years resulted in Apples being available throughout the 12 months of the year. In January of 1939, we even saw Crofton marketed alongside of Granny Smith, Yates, and Democrat, the absence of early Apples from the Sydney metropolitan districts resulting in high prices for these old season fruits. It is not recorded, however, how many customers retailers lost through dissatisfied buyers, nor what amount of money growers and agents lost through subsequent rebates.

The Australian Apple and Pear Council in December, 1937, made tentative suggestions regarding the last dates upon which certain varieties could be marketed. These ultimate periods of necessity would have to accommodate the latest districts, and the problem of personal judgment as to the time to market still would remain for producers in all other districts. Publicity regarding the merits of varieties during the period of their harvest bearing appears to offer a solution of the problem, the period of advertising obviously being the period to market.

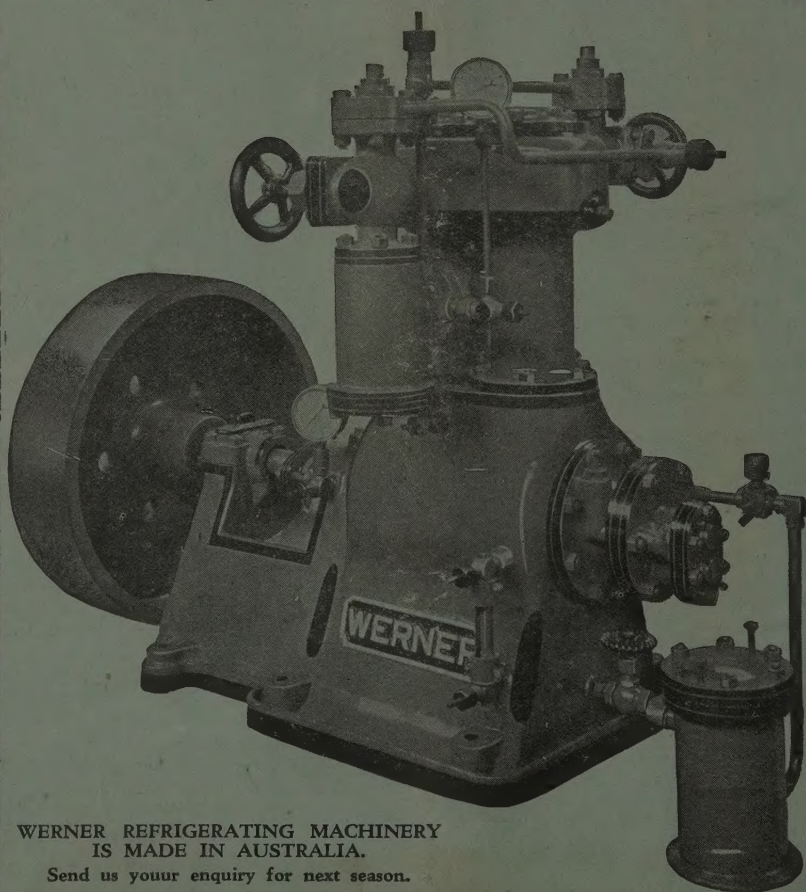
The recent Royal Commission of Inquiry paid considerable attention to this problem as being one of the causes of limited fruit consumption, of unpayable returns, and consequent hardship amongst growers. The recommendations that resulted were definite, and are already well known. These, together with other matters, are no doubt being the subject of consideration by the Minister for Agriculture at the present time, the results of which will be awaited with great interest.

## CATALOGUES RECEIVED.

A. G. Nightingale & Co., Emerald, Victoria: List of fruit trees, berry plants and nuts. Among the varieties of Almonds listed were noted Early Jordan, White Nonpareil, Papershell, Golden State, Ne Plus Ultra, Brandes Jordan, I.X.L. and others. Berry fruits listed include Red and Black Currants, Gooseberries, Blackberries, Loganberries, Raspberries and Strawberries. A separate list is also issued of standard, bush, climbing and polyantha Roses.

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